

Practice Book for Mathematics

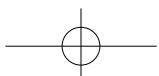
Answer Book

Grade

2



Japan International
Cooperation Agency



1 - 1 Tables and Graphs
Let's Make a Table and Draw a Graph

Example 1 List the number of items a shop sells.

1 Tally them on the graph using a ○.

2 Fill the numbers in the table.

Name	Pen	Notebook	Scissors	Toilet roll	Soda
Number	3	4	2	6	5

1 List the number of stationeries you have.

1 Tally them on the graph using a ○.

2 Fill the numbers in the table.

Name	Pen	Notebook	Scissors	Eraser	Pencil
Number	5	6	3	1	3

2

Example 2 List the number of fruits you have.

1 Tally them on the graph using a ○.

Watermelon	○ ○			
Orange	○ ○ ○ ○ ○			
Banana	○ ○ ○ ○ ○			

2 Fill the numbers in the table.

Name of fruits	Number of fruits
Watermelon	2
Orange	5
Banana	4

2 List the number of vegetables you have.

1 Tally them on the graph using a ○.

Maize	○ ○ ○ ○			
Garlic	○ ○			
Tomato	○ ○ ○ ○ ○			
Onion	○ ○ ○ ○			
Carrot	○ ○ ○			

2 Fill the numbers in the table.

Name of vegetables	Number of vegetables
Maize	4
Garlic	2
Tomato	5
Onion	2
Carrot	3

3

1 - 2 Tables and Graphs
Finding What a Graph Shows

Example Find out what kind of fruits your classmates like.

Banana	○ ○ ○ ○ ○	Name	Number
Mango	○ ○ ○ ○	Banana	5
Orange	○ ○ ○	Mango	4
Pineapple	○	Orange	3
Watermelon	○ ○	Pineapple	1
		Watermelon	2

- 1 What is the most popular fruit?
Banana
- 2 What is the difference between the number of mangoes and pineapples?
3

1 Find out what kind of vehicles are there in town.

Bicycle	○ ○ ○ ○ ○	Name	Number
Bus	○ ○ ○	Bicycle	5
Truck	○ ○	Bus	3
Motorbike	○ ○ ○	Truck	2
Tractor	○	Bike	3
		Tractor	1

- 1 What is the most common vehicle in the town?
Bicycle
- 2 What is the difference between the number of buses and tractors?
2

4

2 Find out what kind of vegetables are sold in a store.

Cucumber	○ ○ ○ ○ ○				
Potato	○ ○				
Cabbage	○ ○ ○				
Tomato	○ ○ ○ ○ ○ ○ ○ ○				
Onion	○ ○ ○ ○ ○ ○ ○ ○ ○ ○				

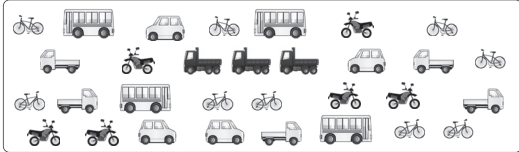
Name	Number
Cucumber	5
Potato	2
Cabbage	3
Tomato	8
Onion	10

- 1 How many cabbages are on sale?
3
- 2 What vegetable is there the most of?
Onion
- 3 What vegetable is there the least of?
Potatoes
- 4 What is the difference between the number of potatoes and tomatoes?
6
- 5 What is the difference between the number of potatoes and cucumbers?
3

5

1 - 3 Tables and Graphs **Review**

1 List the number of vehicles observed in town.



1 Tally them on the graph using a \bigcirc .

Bicycle	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Bus	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Truck	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Motorbike	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc			
Passenger car	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Dump truck	\bigcirc	\bigcirc	\bigcirc						

2 Fill the numbers in the table.

Name of vehicles	Number of vehicles
Bicycle	9
Bus	4
Truck	5
Motorbike	6
Passenger car	4
Dump truck	3

2 Find out what kind of subjects are popular in your class.

Language	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Social studies	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc		
Mathematics	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc	
Science	\bigcirc	\bigcirc	\bigcirc	\bigcirc	\bigcirc				
Second language	\bigcirc	\bigcirc	\bigcirc						

Name of subjects	Number of students
Language	5
Social studies	7
Mathematics	9
Science	6
Second language	3

1 How many students like Social studies? 7

2 What subjects do 5 students like? Language

3 What is the most popular subject in the class? Mathematics

3 Find out what kind of snacks your classmates have.

Candy	\bigcirc	\bigcirc		
Cookies	\bigcirc	\bigcirc	\bigcirc	
Chocolate	\bigcirc	\bigcirc	\bigcirc	\bigcirc
Donuts	\bigcirc	\bigcirc		

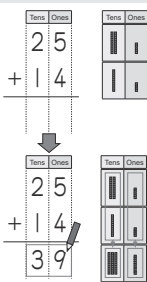
Name of snacks	Number of snacks
Candy	2
Cookies	3
Chocolate	5
Donuts	2

1 Which snack has the same number of snacks as candy? Donuts

2 How many more cookies do you need to have the same number as chocolate? 2

2 - 1 Addition **Addition Algorithm (1)**

Example Calculate $25 + 14$ by using the algorithm.



Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place

$$5 + 4 = 9$$

Calculation of the tens place

$$2 + 1 = 3$$

$$25 + 14 = 39$$

Calculate the following problems by using the algorithm.

1
$$\begin{array}{r} 23 \\ + 14 \\ \hline 37 \end{array}$$

2
$$\begin{array}{r} 25 \\ + 41 \\ \hline 66 \end{array}$$

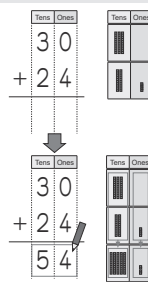
3
$$\begin{array}{r} 36 \\ + 23 \\ \hline 59 \end{array}$$

4
$$\begin{array}{r} 43 \\ + 35 \\ \hline 78 \end{array}$$

5
$$\begin{array}{r} 62 \\ + 23 \\ \hline 85 \end{array}$$

2 - 2 Addition **Addition Algorithm (2)**

Example Calculate $30 + 24$ by using the algorithm.



Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place

$$0 + 4 = 4$$

Calculation of the tens place

$$3 + 2 = 5$$

$$30 + 24 = 54$$

Calculate the following problems by using the algorithm.

1
$$\begin{array}{r} 30 \\ + 14 \\ \hline 44 \end{array}$$

2
$$\begin{array}{r} 20 \\ + 36 \\ \hline 56 \end{array}$$

3
$$\begin{array}{r} 49 \\ + 30 \\ \hline 79 \end{array}$$

4
$$\begin{array}{r} 27 \\ + 40 \\ \hline 67 \end{array}$$

5
$$\begin{array}{r} 30 \\ + 50 \\ \hline 80 \end{array}$$

2 - 3 Addition

Addition Algorithm (3)

Example Calculate $32 + 4$ by using the algorithm.

Tens	Ones	Tens	Ones
3	2		
+	4		
↓			
Tens	Ones	Tens	Ones
3	2		
+	4		
3	6		

Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place
 $2 + 4 = 6$

Calculation of the tens place
Only 3
 $32 + 4 = 36$

"4" does not have any numbers in the tens place. Remember "4" is the same as "04". Therefore, this addition problem is same as the previous problem.

2 - 4 Addition

Addition Algorithm (4)

Example Calculate $3 + 64$ by using the algorithm.

Tens	Ones	Tens	Ones
3			
+	64		
or			
Tens	Ones	Tens	Ones
	3		
+	64		
6	7		

When we write this addition problem by using the algorithm, which is correct?

Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place
 $3 + 4 = 7$

Calculation of the tens place
6
 $3 + 64 = 67$

Calculate the following problems by using the algorithm.

1

Tens	Ones	Tens	Ones
3	2		
+	5		
3	7		

2

Tens	Ones	Tens	Ones
5	3		
+	4		
5	7		

3

Tens	Ones	Tens	Ones
6	5		
+	3		
6	8		

4

Tens	Ones	Tens	Ones
2	2		
+	7		
2	9		

5

Tens	Ones	Tens	Ones
8	2		
+	4		
8	6		

1

Tens	Ones	Tens	Ones
3			
+	62		
6	5		

2

Tens	Ones	Tens	Ones
5			
+	54		
5	9		

3

Tens	Ones	Tens	Ones
4			
+	23		
2	7		

4

Tens	Ones	Tens	Ones
7			
+	82		
8	9		

5

Tens	Ones	Tens	Ones
	6		
+	31		
3	7		

2 - 5 Addition

Review (1)

1 Calculate the following problems by using the algorithm.

1

5	1
+	23
7	4

2

3	5
+	54
8	9

3

3	6
+	32
6	8

4

2	0
+	18
3	8

5

2	5
+	40
6	5

6

3	0
+	10
4	0

7

5	2
+	6
5	8

8

	2
+	43
4	5

2 Calculate the following problems by using the algorithm.

1

34	+ 15
3	4
+	15
4	9

2

13	+ 22
1	3
+	22
3	5

3

61	+ 25
6	1
+	25
8	6

4

20	+ 70
2	0
+	70
9	0

5

48	+ 50
4	8
+	50
9	8

6

10	+ 34
1	0
+	34
4	4

7

63	+ 6
6	3
+	6
6	9

8

7	+ 70
	7
+	70
	77

2 - 6 Addition

Addition Algorithm (5)

Example Calculate $37 + 28$ by using the algorithm.

Tens	Ones	Tens	Ones
3	7		
+	28		
↓			
Tens	Ones	Tens	Ones
3	7		
+	28		
5	5		

Line up the numbers vertically in each place.

Calculation of the ones place
 $7 + 8 = 15$

7 and 8 make 15 (10 and 5).

Regroup 1 to the tens place.

Calculation of the tens place
The regrouped 1 and 3 make 4.
 $4 + 2 = 6$
 $37 + 28 = 65$

Calculate the following problems by using the algorithm.

1

Tens	Ones	Tens	Ones
3	7		
+	15		
5	2		

2

Tens	Ones	Tens	Ones
2	6		
+	45		
7	1		

3

Tens	Ones	Tens	Ones
1	8		
+	29		
4	7		

4

Tens	Ones	Tens	Ones
4	4		
+	38		
8	2		

5

Tens	Ones	Tens	Ones
5	9		
+	26		
8	5		

2 - 7 Addition
Addition Algorithm (6)

Example Calculate $24 + 46$ by using the algorithm.

Tens	Ones	Tens	Ones
2	4	4	6
+ 4 6			

2	4		
+ 4 6			

1	2	4	6
+ 4 6			

7	0		

Line up the numbers vertically in each place.
Calculation of the ones place
 $4 + 6 = 10$
4 and 6 make 10.
Regroup 1 to the tens place.
Calculation of the tens place
The regrouped 1 and 2 make 3.
 $3 + 4 = 7$
 $24 + 46 = 70$

2 - 8 Addition
Addition Algorithm (7)

Example Calculate $28 + 6$ by using the algorithm.

Tens	Ones	Tens	Ones
2	8		
+ 6			

2	8		
+ 6			

1	2	8	
+ 6			

3	4		

Line up the numbers vertically in each place.
Calculation of the ones place
 $8 + 6 = 14$
8 and 6 make 14 (10 and 4).
Regroup 1 to the tens place.
Calculation of the tens place
The regrouped 1 and 2 make 3.
 $28 + 6 = 34$

Calculate the following problems by using the algorithm.

1	Tens	Ones	Tens	Ones
	3	1		
	+ 1 9			

	5	0		

2	Tens	Ones	Tens	Ones
	6	7		
	+ 2 3			

	9	0		

3	Tens	Ones	Tens	Ones
	1	2		
	+ 2 8			

	4	0		

4	Tens	Ones	Tens	Ones
	4	6		
	+ 2 4			

	7	0		

5	Tens	Ones	Tens	Ones
	2	5		
	+ 5 5			

	8	0		

Calculate the following problems by using the algorithm.

1	Tens	Ones	Tens	Ones
	5	9		
	+ 6			

	6	5		

2	Tens	Ones	Tens	Ones
	6	4		
	+ 7			

	7	1		

3	Tens	Ones	Tens	Ones
	7	3		
	+ 8			

	8	1		

4	Tens	Ones	Tens	Ones
	4	7		
	+ 6			

	5	3		

5	Tens	Ones	Tens	Ones
	3	5		
	+ 9			

	4	4		

2 - 9 Addition
Addition Algorithm (8)

Example Calculate $9 + 37$ by using the algorithm.

Tens	Ones	Tens	Ones
	9		
+ 3 7			

	9		
+ 3 7			

1	3	7	
+ 3 7			

4	6		

Line up the numbers vertically in each place.
Calculation of the ones place
 $9 + 7 = 16$
9 and 7 make 16 (10 and 6).
Regroup 1 to the tens place.
Calculation of the tens place
The regrouped 1 and 3 make 4.
 $9 + 37 = 46$

Calculate the following problems by using the algorithm.

1	Tens	Ones	Tens	Ones
	8			
	+ 6 6			

	7	4		

2	Tens	Ones	Tens	Ones
	5			
	+ 8 7			

	9	2		

3	Tens	Ones	Tens	Ones
	4			
	+ 3 9			

	4	3		

4	Tens	Ones	Tens	Ones
	7			
	+ 5 8			

	6	5		

5	Tens	Ones	Tens	Ones
	6			
	+ 2 6			

	3	2		

2 - 10 Addition
Addition Problems

Example There are two second grade classes in my school. One class has 36 students and another class has 35 students. How many second grade students are there altogether?

Math Sentence $36 + 35 = 71$

Answer 71 students

	3	6
+	3	5

	7	1

1 I have 27 notebooks and my sister has 26 notebooks. How many notebooks are there altogether?

Math Sentence $27 + 26 = 53$

Answer 53 notebooks

	2	7
+	2	6

	5	3

2 My friend read 23 pages of a book yesterday. He read 37 pages today. How many pages did he read altogether?

Math Sentence $23 + 37 = 60$

Answer 60 pages

	2	3
+	3	7

	6	0

3 My brother had 6 pencils. He bought 24 more pencils today. How many pencils does he have altogether?

Math Sentence $6 + 24 = 30$

Answer 30 pencils

		6
+	2	4

	3	0

2 - 11

Addition

Review (2)

1 Calculate the following problems by using the algorithm.

- 1 24 + 17 2 34 + 57 3 67 + 18 4 25 + 45

2	4
+	17
4	1

3	4
+	57
9	1

6	7
+	18
8	5

2	5
+	45
7	0

- 5 38 + 7 6 54 + 6 7 8 + 16 8 4 + 38

3	8
+	7
4	5

5	4
+	6
6	0

8	
+	16
2	4

4	
+	38
4	2

2 Put an × over the mistakes. Write the correct algorithm on the right.

- 1 38 + 12 2 16 + 45

3	8
+	12
4	0

3	8
+	12
5	0

1	6
+	45
5	1

1	6
+	45
6	1

- 3 6 + 27 4 20 + 4

8	
+	27
8	7

	6
+	27
	33

2	0
+	4
6	0

2	0
+	4
	24

3 Answer the following questions.

- 1 I had 25 pieces of candy. My mother gave me 15 pieces of candy. How many pieces of candy do I have now?

Math Sentence $25 + 15 = 40$

2	5
+	15
4	0

Answer 40 pieces of candy

- 2 36 children were playing in the park. Then 18 children came to the park. How many children are there now?

Math Sentence $36 + 18 = 54$

3	6
+	18
5	4

Answer 54 children

- 3 I picked 24 flowers in the park. My father picked 37 flowers. How many flowers did we pick altogether?

Math Sentence $24 + 37 = 61$

2	4
+	37
6	1

Answer 61 flowers

- 4 Make math sentences that have an answer of 32. The numbers 1 to 9 can be used in the . You can use the same number repeatedly.

Example $21 + 11 = 32$ $14 + 18 = 32$

$11 + 21 = 32$ $15 + 17 = 32$

$13 + 19 = 32$

How many math sentences can you make?

3 - 1

Subtraction

Addition Algorithm (1)

Example Calculate $39 - 15$ by using the algorithm.

3	9
-	15
2	4

Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place
 $9 - 5 = 4$

Calculation of the tens place
 $3 - 1 = 2$

$39 - 15 = 24$

Calculate the following problems by using the algorithm.

1

3	9
-	12
2	7

 2

4	6
-	15
3	1

3

7	5
-	23
5	2

 4

6	8
-	52
1	6

 5

9	7
-	53
4	4

3 - 2

Subtraction

Subtraction Algorithm (2)

Example Calculate $37 - 20$ by using the algorithm.

3	7
-	20
1	7

Line up the numbers vertically in each place.

Calculate each place separately.

Calculation of the ones place
 $7 - 0 = 7$

Calculation of the tens place
 $3 - 2 = 1$

$37 - 20 = 17$

Calculate the following problems by using the algorithm.

1

3	7
-	10
2	7

 2

6	3
-	30
3	3

3

8	4
-	40
4	4

 4

7	9
-	60
1	9

 5

8	1
-	50
3	1

3 - 3 Subtraction
Subtraction Algorithm (3)

Example Calculate $37 - 5$ by using the algorithm.

When we write this subtraction problem by using the algorithm, which is correct?

$$\begin{array}{r} 37 \\ - 5 \\ \hline \end{array} \quad \text{or} \quad \begin{array}{r} 37 \\ - 5 \\ \hline \end{array}$$

Line up the numbers vertically in each place. Calculate each place separately.

Calculation of the ones place
 $7 - 5 = 2$

Calculation of the tens place
No calculation
 $37 - 5 = 32$

"5" does not have any numbers in the tens place. Remember "5" is the same as "05". Therefore, this problem is same as the previous problem.

Calculate the following problems by using the algorithm.

1 $\begin{array}{r} 37 \\ - 6 \\ \hline 31 \end{array}$

2 $\begin{array}{r} 56 \\ - 3 \\ \hline 53 \end{array}$ Nothing is left in the ones place.

3 $\begin{array}{r} 78 \\ - 6 \\ \hline 72 \end{array}$

4 $\begin{array}{r} 45 \\ - 4 \\ \hline 41 \end{array}$

5 $\begin{array}{r} 21 \\ - 1 \\ \hline 20 \end{array}$

3 - 4 Subtraction
Review (1)

1 Calculate the following problems by using the algorithm.

1 $\begin{array}{r} 45 \\ - 21 \\ \hline 24 \end{array}$

2 $\begin{array}{r} 58 \\ - 37 \\ \hline 21 \end{array}$

3 $\begin{array}{r} 78 \\ - 35 \\ \hline 43 \end{array}$

4 $\begin{array}{r} 94 \\ - 61 \\ \hline 33 \end{array}$

5 $\begin{array}{r} 68 \\ - 40 \\ \hline 28 \end{array}$

6 $\begin{array}{r} 35 \\ - 20 \\ \hline 15 \end{array}$

7 $\begin{array}{r} 87 \\ - 4 \\ \hline 83 \end{array}$

8 $\begin{array}{r} 19 \\ - 8 \\ \hline 11 \end{array}$

2 Calculate the following problems by using the algorithm.

1 $85 - 41$ $\begin{array}{r} 85 \\ - 41 \\ \hline 44 \end{array}$

2 $58 - 23$ $\begin{array}{r} 58 \\ - 23 \\ \hline 35 \end{array}$

3 $88 - 16$ $\begin{array}{r} 88 \\ - 16 \\ \hline 72 \end{array}$

4 $73 - 40$ $\begin{array}{r} 73 \\ - 40 \\ \hline 33 \end{array}$

5 $66 - 20$ $\begin{array}{r} 66 \\ - 20 \\ \hline 46 \end{array}$

6 $95 - 15$ $\begin{array}{r} 95 \\ - 15 \\ \hline 80 \end{array}$

7 $65 - 2$ $\begin{array}{r} 65 \\ - 2 \\ \hline 63 \end{array}$

8 $57 - 4$ $\begin{array}{r} 57 \\ - 4 \\ \hline 53 \end{array}$

3 - 5 Subtraction
Subtraction Algorithm (4)

Example Calculate $45 - 18$ by using the algorithm.

Line up the numbers vertically in each place.

Calculation of the ones place
You can't take 8 from 5. You need to regroup from the tens place.
 $15 - 8 = 7$

Calculation of the tens place
Since you regrouped, the tens place becomes 3.
 $3 - 1 = 2$
This actually means " $30 - 10 = 20$ ", doesn't it?

$45 - 18 = 27$

1 Calculate the following problems by using the algorithm.

1 $\begin{array}{r} 45 \\ - 16 \\ \hline 29 \end{array}$

2 $\begin{array}{r} 33 \\ - 16 \\ \hline 17 \end{array}$

3 $\begin{array}{r} 53 \\ - 25 \\ \hline 28 \end{array}$

4 $\begin{array}{r} 63 \\ - 19 \\ \hline 44 \end{array}$

5 $\begin{array}{r} 86 \\ - 47 \\ \hline 39 \end{array}$

6 $\begin{array}{r} 72 \\ - 26 \\ \hline 46 \end{array}$

7 $\begin{array}{r} 95 \\ - 69 \\ \hline 26 \end{array}$

8 $\begin{array}{r} 82 \\ - 44 \\ \hline 38 \end{array}$

9 $\begin{array}{r} 41 \\ - 23 \\ \hline 18 \end{array}$

2 Calculate the following problems by using the algorithm.

1 $\begin{array}{r} 94 \\ - 78 \\ \hline 16 \end{array}$

2 $\begin{array}{r} 67 \\ - 19 \\ \hline 48 \end{array}$

3 $\begin{array}{r} 83 \\ - 24 \\ \hline 59 \end{array}$

4 $\begin{array}{r} 56 \\ - 29 \\ \hline 27 \end{array}$

5 $\begin{array}{r} 47 \\ - 19 \\ \hline 28 \end{array}$

6 $\begin{array}{r} 51 \\ - 28 \\ \hline 23 \end{array}$

7 $\begin{array}{r} 71 \\ - 24 \\ \hline 47 \end{array}$

8 $\begin{array}{r} 84 \\ - 56 \\ \hline 28 \end{array}$

3 - 6 Subtraction

Subtraction Algorithm (5)

Example Calculate $40 - 18$ by using the algorithm.

Tens	Ones
4	0
-	1
	8

Line up the numbers vertically in each place.

Calculation of the ones place
You can't take 8 from 0. You need to regroup from the tens place.

Tens	Ones
3	10
-	1
	8

$10 - 8 = 2$

Calculation of the tens place
Since you regrouped, the tens place becomes 3.

$3 - 1 = 2$

This actually means " $30 - 10 = 20$ ", doesn't it?

$40 - 18 = 22$

3 - 7 Subtraction

Subtraction Algorithm (6)

Example Calculate $40 - 8$ by using the algorithm.

Tens	Ones
4	0
-	
	8

Line up the numbers vertically in each place.

Calculation of the ones place
You can't take 8 from 0. You need to regroup from the tens place.

$10 - 8 = 2$

Calculation of the tens place
Since you regrouped, 4 in the tens place becomes 3. There is nothing being subtracted from it. So, it is simply 3.

$40 - 8 = 32$

Calculate the following problems by using the algorithm.

1	2	3	4
$40 - 16$	$80 - 53$	$70 - 12$	$50 - 27$
24	27	58	23

Calculate the following problems by using the algorithm.

1	2	3	4
$40 - 3$	$80 - 6$	$90 - 5$	$70 - 2$
37	74	85	68

3 - 8 Subtraction

Properties of Subtraction

Instruction If you add the number being subtracted to the answer, you will get the number you are subtracting from.

The number being subtracted from	The number subtracting	Answer
37	$- 18$	$= 19$
19	$+ 18$	$= 37$

By using the algorithm, you can do the following.

The number being subtracted from	37	19
The number subtracting	$- 18$	$+ 18$
Answer	19	37

Example Calculate and find the answer. Then check the answer using addition.

$63 - 45$	63	18
	$- 45$	$+ 45$
	18	63

Calculate and find the answers. Then check the answers using addition.

1	2
$44 - 29$	$56 - 18$
15	38

3 - 9 Subtraction

Subtraction Problems

Example My brother is reading a 96-page book. He has already read 51 pages. How many pages are left?

Math Sentence $96 - 51 = 45$

Answer 45 pages

9	6
-	5
	1
4	5

1 I had 43 pieces of candy. I gave 28 pieces of candy to my friends. How many pieces of candy do I have left?

Math Sentence $43 - 28 = 15$

Answer 15 pieces of candy

4	3
-	2
	8
1	5

2 There are 55 flowers in the park. If we pick 15, how many will be left?

Math Sentence $55 - 15 = 40$

Answer 40 flowers

5	5
-	1
	5
4	0

3 My class library has 48 books. Today it has 27 books. How many books have been checked out?

Math Sentence $48 - 27 = 21$

Answer 21 books

4	8
-	2
	7
2	1

3 - 10 Subtraction **Review (2)**

1 Calculate the following problems by using the algorithm.

- 1 $66 - 49$ 2 $57 - 38$ 3 $65 - 36$ 4 $45 - 29$

6	6
-	4
1	7

5	7
-	3
1	9

6	5
-	3
2	9

4	5
-	2
1	6

- 5 $75 - 47$ 6 $83 - 48$ 7 $60 - 26$ 8 $73 - 8$

7	5
-	4
2	8

8	3
-	4
3	5

6	0
-	2
3	4

7	3
-	8
6	5

2 Put an \times over the mistakes. Write the correct algorithm on the right.

1 $33 - 15$

3	3
-	1
2	2

3	3
-	1
1	8

2 $58 - 39$

5	8
-	3
2	9

5	8
-	3
1	9

3 $50 - 45$

5	0
-	4
1	5

5	0
-	4
5	5

4 $73 - 5$

7	3
-	5
2	3

7	3
-	5
6	8

3 Answer the following questions.

- 1 There are 36 students in my class. 19 students are boys. How many girls are there?

Math Sentence $36 - 19 = 17$

3	6
-	1
1	7

Answer 17 girls

- 2 My mother had 50 necklaces. She gave 25 necklaces to her friends. How many necklaces does my mother have left?

Math Sentence $50 - 25 = 25$

5	0
-	2
2	5

Answer 25 necklaces

- 3 There are 93 books in my house. I lent 9 of them to my classmates. How many books are left?

Math Sentence $93 - 9 = 84$

9	3
-	9
8	4

Answer 84 books

- 4 Make math sentences that have an answer of 36. The numbers 2, 3, 5, 6 and 8 can be used in the \square . You can use the same number repeatedly.

Example $58 - 22 = 36$ $62 - 26 = 36$

$68 - 32 = 36$

$88 - 52 = 36$

How many math sentences can you make?

4 - 1 Units of Length **Centimetre (1)**

Example Measure the length of the pencil using a and a .

4 rocks long and some extra

7 clips long

The length of a rock and a clip are different. It is difficult to find out the actual length of the pencil.

A centimetre is the standard unit used to measure the length. It is written as **cm**.

1 Measure the length of the following items using with 1 cm side.

1 6 cm and some extra

2 8 cm and some extra

3 5 cm

4 - 2 Units of Length **Centimetre (2)**

Example How many cm long are the items below?

(a) 2 cm

(b) 3 cm

A ruler is a device to measure length and draw a straight line.

1 How many cm long are the items below?

1 4 cm

2 5 cm

3 7 cm

4 6 cm

4 - 3 Units of Length

Millimetre

Example How long is the length of the objects?

a) b)
 a) $5 \text{ cm } 2 \text{ mm}$ b) $1 \text{ cm } 5 \text{ mm}$

Divide one cm into 10 equal parts. Each part is called a **millimetre**.

- 1 millimetre can be written as 1 mm.
- 1 cm equals 10 mm.

1 How long is the length of the objects?

1 2 cm

2 $3 \text{ cm } 5 \text{ mm}$

3 $2 \text{ cm } 5 \text{ mm}$

4 $4 \text{ cm } 2 \text{ mm}$

4 - 4 Units of Length

Drawing Straight Lines

Instruction How to draw a straight line using a ruler.

1. Draw a dot as a starting point.
2. Place the zero of the ruler at the starting point.
3. Draw another dot and connect the dots with a line.

Example Draw the following lengths as straight lines from the points by using a ruler.

1 5 cm
 2 8 cm 5 mm

Draw the following lengths as straight lines from the points by using a ruler.

1 6 cm
 2 3 cm 5 mm
 3 7 cm 3 mm
 4 4 cm 9 mm

4 - 5 Units of Length

Addition of Lengths

Example 1 How long are the line by using a ruler?

$3 \text{ cm } 2 \text{ cm}$ $3 \text{ cm} + 2 \text{ cm} = 5 \text{ cm}$

Example 2 Calculate the following.

(a) $2 \text{ cm} + 4 \text{ cm} = 6 \text{ cm}$
 (b) $3 \text{ cm } 4 \text{ mm} + 5 \text{ cm } 5 \text{ mm} = 8 \text{ cm } 9 \text{ mm}$

Calculate the centimeters and the millimeters separately.

1 How long are line (a) and line (b) by using a ruler?

(a) $3 \text{ cm} + 4 \text{ cm } 2 \text{ mm} = 7 \text{ cm } 2 \text{ mm}$

(b) $6 \text{ cm } 1 \text{ mm} + 4 \text{ cm } 2 \text{ mm} = 10 \text{ cm } 3 \text{ mm}$

2 Calculate the following.

1 $4 \text{ cm} + 6 \text{ cm} = 10 \text{ cm}$ 2 $5 \text{ cm} + 7 \text{ cm} = 12 \text{ cm}$
 3 $3 \text{ cm } 6 \text{ mm} + 2 \text{ cm} = 5 \text{ cm } 6 \text{ mm}$
 4 $6 \text{ cm } 5 \text{ mm} + 8 \text{ cm} = 14 \text{ cm } 5 \text{ mm}$
 5 $5 \text{ mm} + 2 \text{ cm } 3 \text{ cm} = 2 \text{ cm } 8 \text{ mm}$

4 - 6 Units of Length

Subtraction of Lengths

Example 1 What is the difference in length between line (a) and line (b).

(a) $3 \text{ cm } 2 \text{ cm}$ length of (b) length of (a) $5 \text{ cm } 5 \text{ mm} - 5 \text{ cm} = 5 \text{ mm}$

(b) $4 \text{ cm } 5 \text{ mm } 1 \text{ cm}$ We can subtract the shorter one from the longer one.

Example 2 Calculate the following.

$5 \text{ cm } 8 \text{ mm} - 2 \text{ cm } 3 \text{ mm} = 3 \text{ cm } 5 \text{ mm}$

1 What is the difference in length between the following lines?

(a) $4 \text{ cm} - 3 \text{ cm} = 1 \text{ cm}$

(b) $5 \text{ cm } 8 \text{ mm} - 5 \text{ cm } 1 \text{ mm} = 7 \text{ mm}$

2 Calculate the following.

1 $7 \text{ cm} - 3 \text{ cm} = 4 \text{ cm}$ 2 $13 \text{ cm} - 4 \text{ cm} = 9 \text{ cm}$
 3 $8 \text{ cm } 5 \text{ mm} - 2 \text{ cm} = 6 \text{ cm } 5 \text{ mm}$
 4 $12 \text{ cm } 2 \text{ mm} - 8 \text{ cm} = 4 \text{ cm } 2 \text{ mm}$
 5 $3 \text{ cm } 6 \text{ mm} - 5 \text{ mm} = 3 \text{ cm } 1 \text{ mm}$

4 - 7 Units of Length
Converting Units of Lengths

Example 1 Convert the lengths to mm.

(a) 3 cm = mm (b) 1 cm 2 mm = mm



Example 2 Convert the lengths to cm / cm and mm

(a) 20 mm = cm (b) 32 mm = cm mm

1 Convert the lengths to mm.

- 1** 5 cm = mm **2** 7 cm = mm
3 4 cm = mm **4** 12 cm = mm
5 1 cm 6 mm = mm **6** 2 cm 5 mm = mm
7 6 cm 7 mm = mm **8** 10 cm 3 mm = mm

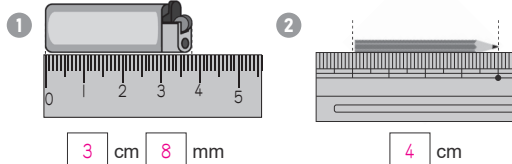
2 Convert the lengths to cm or cm and mm.

- 1** 60 mm = cm **2** 80 mm = cm
3 90 mm = cm **4** 100 mm = cm
5 15 mm = cm mm **6** 54 mm = cm mm
7 107 mm = cm mm **8** 131 mm = cm mm

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4 - 8 Units of Length
Review

1 How long is the length of the objects?



2 Draw the following lengths as straight lines from the points by using a ruler.

- 1** 7 cm
2 10 cm 2 mm

3 Calculate the following.

- 1** 5 cm + 10 cm = cm **2** 13 cm - 7 cm = cm
3 3 cm 2 mm + 4 cm 1 mm = cm mm
4 9 cm 5 mm - 5 cm 3 mm = cm mm

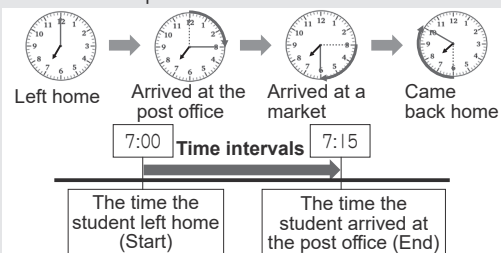
4 Convert the lengths to mm, cm, or cm and mm.

- 1** 20 mm = cm **2** 10 cm = mm
3 190 mm = cm **4** 13 cm = cm mm
5 2 cm 5 mm = mm **6** 118 mm = cm mm

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5 - 1 Time Points and Time Intervals
How to Read the Time Intervals

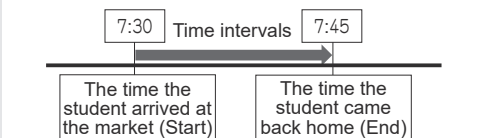
Instruction A student goes to town to buy stamps and groceries. How many minutes did it take from when the student left home until he arrived at the post office?



It took 15 minutes from the time the student left home to the time the student arrived at the post office.

A time interval means working out how long something takes.

Example 1 How many minutes did it take from when the student arrived at the market until the student came back home?



40

It took minutes from the time the student arrived at the market until he came back home.

1 A girl goes to town to have tea and buy groceries.



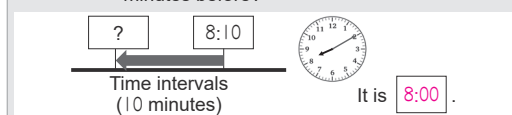
1 How many minutes did it take from when she left home until she arrived at the bus stop?

It took minutes.

2 How many minutes did it take from when she arrived at the bus stop until she arrived at the market?

It took minutes.

Example 2 It is 8:10 now. What is the **time point** of 10 minutes before?



2 It is 9:30 now. Write the time points that shows the following.

- 1** 30 minutes before **2** 10 minutes after
3 15 minutes after **4** 25 minutes before

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5 - 2 Time Points and Time Intervals

A.M. and P.M.

Example 1 Observe the time that the clock marks for the different activities. Find out what time did the student do the following activities.

1 Getting out of bed It's o'clock.

2 Preparing dinner It's o'clock.

Instruction AM and PM

a.m. stands for ante meridian, which means before noon (morning)

p.m. stands for post meridian, which means after noon (afternoon)

Example 2 Tell each time using a.m. and p.m.

Getting out of bed: It's 5 in the morning,

Preparing dinner: It's 5 in the afternoon,

1 Observe the time that the clock marks for the student's different activities. Find out what time did the student do the following activities using a.m. and p.m.

1 Taking a class It's 9 in the morning,

2 Preparing a dinner: It's 9 in the afternoon,

The band shows the time interval which the shorthand goes around. The numbers indicate hours.

2 The following tape diagram shows hours in a day starting from 12:00 a.m. What are the time points to A, B, C, and D using a.m. and p.m.?

1 Time point A

2 Time point B

3 Time point C

4 Time point D

3 What time do you do the following activities? Tell the time using a.m. and p.m.

1 Getting out of bed

2 Leaving for school

3 Coming back home

4 Going to bed

Example

5 - 3 Time Points and Time Intervals

Units of time

Example 1 A teacher goes to the city office by bus.

1 How many minutes did it take from his house to the office?

The time he left home (Start) The time he arrived at the city office (End) minutes

2 How many hours did it take from when the teacher left home until he came back home?

The time he left home (Start) The time he came back (End) hours.

60 minutes equals 1 hour. 1 hour equals 60 minutes.

1 A boy goes to the city library by bus.

1 How many minutes did it take from his house to catch the bus? minutes

2 How many minutes did it take from catching the bus to arriving at the city library? minutes

3 How many hours did it take from leaving home to coming back home? hours.

Example 2 The following tape diagram shows hours in a day starting from 12:00 a.m. How many hours are there in the afternoon?

There are hours in the afternoon.

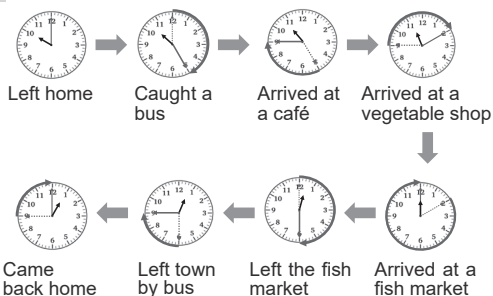
2 Related to the tape diagram above, how many hours are there before noon? How many hours are there in a day?

There are hours before noon.

There are hours in a day.

5 - 4 Time Points and Time Intervals **Review**

1 A girl goes to town to have tea and buy groceries.



- How many minutes did it take from when she left home to catch the bus?
It took **25 minutes**.
- How many hours and minutes did it take from when she arrived at the vegetable shop until she left the fish market?
It took **1 hour** and **20 minutes**.
- How many minutes did it take from the town to her house by bus?
It took **15 minutes**.
- How many hours did it take from leaving home to coming back home?
It took **3 hours**.

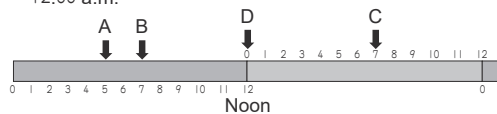
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2 It is 10:20 now. Write the time points that shows the following.

- | | |
|--|---|
| 1 10 minutes after
It is 10:30 . | 2 10 minutes before
It is 10:10 . |
| 3 15 minutes after
It is 10:35 . | 4 20 minutes before
It is 10:00 . |
| 5 45 minutes after
It is 11:05 . | 6 30 minutes before
It is 9:50 . |
| 7 1 hour after
It is 11:20 . | 8 4 hours before
It is 6:20 . |



3 The following tape diagram shows hours in a day from 12:00 a.m.



- What are the time points to A, B, C, and D using a.m. and p.m.?

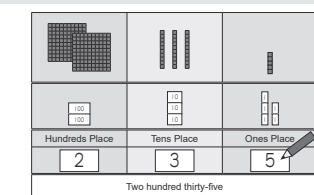
(a) Time point A 5:00 a.m.	(b) Time point B 7:00 a.m.
(c) Time point C 7:00 p.m.	(d) Time point D 12:00 p.m.
- Fill in the blanks

(a) A day equals 24 hours.	(b) 24 hours equals 1 day.
-----------------------------------	-----------------------------------

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6 - 1 Numbers Greater Than 100 **How to Express Numbers**

Example How many are there? Write the number and read it.



There are 2 groups of a hundred. It is called two hundred.
There are 3 groups of a ten. It is called thirty.
There are 5 ones. It is called five.
So, altogether it is called two hundred thirty-five.

How many are there? Write the numbers and read them.

- 1** **5** **3**
One hundred fifty-three
- 3** **1** **4**
Three hundred fourteen
- 4** **2** **9**
Four hundred twenty-nine
- 5** **0** **6**
Five hundred six

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6 - 2 Numbers Greater Than 100 **Structure of Numbers**

Example Write the number in the .

- 4 hundreds, 8 tens, and 5 ones together make **485**.
- 321 is made of **3** hundreds, **2** tens, and **1** ones.

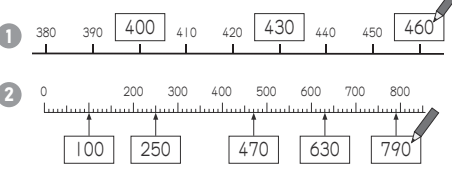
Write the numbers in the .

- 2 hundreds, 3 tens, and 4 ones together make **234**.
- 3 hundreds, 5 tens, and 7 ones together make **357**.
- 5 hundreds, 8 tens, and 3 ones together make **583**.
- 6 hundreds, 7 tens and 0 ones together make **670**.
- 432 is made of **4** hundreds, **3** tens, and **2** ones.
- 245 is made of **2** hundreds, **4** tens, and **5** ones.
- 870 is made of **8** hundreds, **7** tens, and **0** ones.
- 709 is made of **7** hundreds, **0** tens, and **9** ones.

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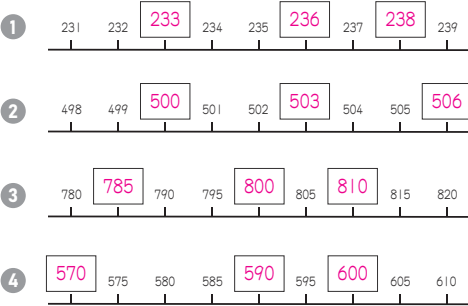
6 - 3 Numbers Greater Than 100
Finding the Numbers on the Number Line

Example Write the numbers in the .

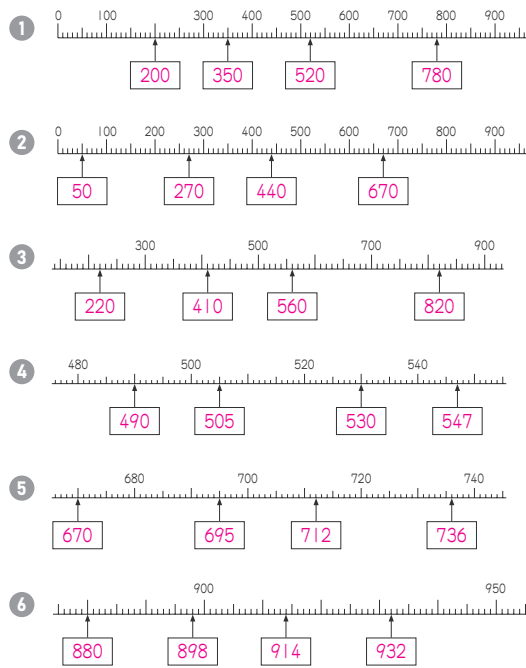


Regarding to the above ① and ②, the smallest tick marks show units of 10. Once we find what is the smallest tick mark, we can find the numbers on the number line easily.

1 Write the numbers in the .



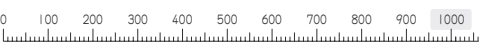
2 Write the numbers in the .



We must find out what the smallest tick marks shows.

6 - 4 Numbers Greater Than 100
One Thousand (1000)

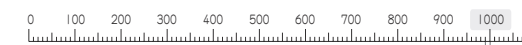
Example The number of 10 hundreds is called 1000. 1000 is shown in the number line as follows:



- How many 100s are there in 1000?
- What is the number that is 100 less than 1000?

Answer the following questions.

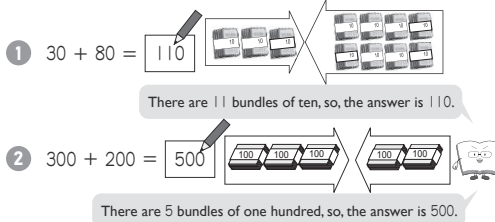
- How many 10s are there in 1000?
- How many more does 900 need to make 1000?
- What is the number that is 400 less than 1000?
- What is the number that is 200 less than 1000?
- What is the number that is 70 less than 1000?
- What is the number that is 10 less than 1000?
- What is the number that is 1 less than 1000?



We can refer this number line when thinking about 1000.

6 - 5 Numbers Greater Than 100
Addition with Tens and Hundreds

Example Calculate the following addition problems.



1 Calculate the following addition problems.

- $30 + 90 =$
- $50 + 80 =$
- $50 + 60 =$
- $60 + 70 =$
- $80 + 60 =$
- $80 + 90 =$
- $20 + 80 =$
- $10 + 90 =$

2 Calculate the following addition problems.

- $300 + 100 =$
- $300 + 400 =$
- $200 + 700 =$
- $400 + 400 =$
- $100 + 600 =$
- $200 + 400 =$
- $100 + 80 =$
- $200 + 60 =$

Think about how many bundles of ten there are.

6 - 6 Numbers Greater Than 100
Subtraction with Tens and Hundreds

Example Calculate the following subtraction problems.

1 $120 - 30 = 90$

There are 12 bundles of ten. Subtract 3 bundles from 12 bundles.

2 $600 - 200 = 400$

There are 6 bundles of one hundred. Subtract 2 bundles from 6 bundles.

1 Calculate the following subtraction problems.

- | | |
|-------------------|-------------------|
| 1 $110 - 30 = 80$ | 2 $120 - 50 = 70$ |
| 3 $150 - 60 = 90$ | 4 $110 - 70 = 40$ |
| 5 $170 - 90 = 80$ | 6 $140 - 80 = 60$ |
| 7 $120 - 90 = 30$ | 8 $180 - 90 = 90$ |

2 Calculate the following subtraction problems.

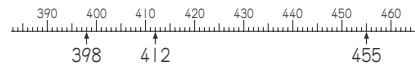
- | | |
|----------------------|----------------------|
| 1 $600 - 300 = 300$ | 2 $500 - 100 = 400$ |
| 3 $700 - 500 = 200$ | 4 $500 - 200 = 300$ |
| 5 $400 - 300 = 100$ | 6 $800 - 300 = 500$ |
| 7 $1000 - 600 = 400$ | 8 $1000 - 200 = 800$ |

1000 has 10 bundles of one hundred. Subtract 6 bundles from 10 bundles.

6 - 7 Numbers Greater Than 100
How to Express Numbers

Example Compare the following two numbers and write the appropriate sign ($<$ or $>$) in the \square .

- 1 $412 > 398$ 2 $412 < 455$
- This means that 412 is greater than 398. This means that 412 is less than 455.



If you look at the number line, you can find the answer easier.

Compare the following two numbers and write the appropriate sign ($<$ or $>$) in the \square .

- | | |
|----------------|----------------|
| 1 $420 > 390$ | 2 $420 < 450$ |
| 3 $300 > 188$ | 4 $635 < 729$ |
| 5 $211 < 323$ | 6 $400 > 389$ |
| 7 $123 < 124$ | 8 $401 > 400$ |
| 9 $503 > 499$ | 10 $852 > 842$ |
| 11 $678 < 687$ | 12 $394 < 404$ |

6 - 8 Numbers Greater Than 100
Making Numbers

Example There are three number cards below. Make the following numbers by using these three cards.

2 4 7

1 The largest number 742

2 The smallest number 247

The largest number card is 7. So, it will be 7**.

There are three number cards below. Make the following numbers by using these three cards.

3 5 8

1 The largest number 853

2 The smallest number 358

3 The second largest number 835

4 The second smallest number 385

5 Numbers that are larger than 500
 538 583 835 853

6 Numbers that are smaller than 500
 358 385

Can you find all four numbers?

There are two numbers altogether.

6 - 9 Numbers Greater Than 100
Review

1 Calculate the following problems.

- | | |
|---------------------|-----------------------|
| 1 $40 + 90 = 130$ | 2 $50 + 70 = 120$ |
| 3 $60 + 50 = 110$ | 4 $300 + 500 = 800$ |
| 5 $200 + 700 = 900$ | 6 $170 - 80 = 90$ |
| 7 $140 - 90 = 50$ | 8 $150 - 70 = 80$ |
| 9 $700 - 400 = 300$ | 10 $1000 - 800 = 200$ |

2 Compare the following two numbers and write the appropriate sign ($<$ or $>$) in the \square .

- | | |
|---------------|---------------|
| 1 $347 > 289$ | 2 $465 < 565$ |
| 3 $657 > 576$ | 4 $809 < 853$ |
| 5 $730 < 732$ | 6 $587 < 589$ |

3 There are three number cards below. Make the following numbers by using these three cards.

2 3 7

1 The largest number 732

2 The second largest number 723

7 - 1 Addition and Subtraction
Addition Algorithm (1)

Example Calculate $72 + 63$ by using the algorithm.

Line up the numbers vertically in each place.
Calculation of the ones place
 $2 + 3 = 5$

Calculation of the tens place
 $7 + 6 = 13$

Write a 3 in the tens place.
Regroup 1 to the hundreds place.
Write a 1 in the hundreds place.
 $72 + 63 = 135$

Calculate the following problems by using the algorithm.

1 $72 + 53 = 125$

2 $84 + 63 = 147$

58

3 $27 + 91 = 118$

4 $51 + 76 = 127$

5 $95 + 53 = 148$

6 $48 + 71 = 119$

7 $53 + 82 = 135$

8 $61 + 55 = 116$

9 $84 + 93 = 177$

10 $60 + 76 = 136$

11 $63 + 62 = 125$

12 $38 + 71 = 109$

13 $88 + 70 = 158$

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7 - 2 Addition and Subtraction
Addition Algorithm (2)

Example Calculate $83 + 49$ by using the algorithm.

Don't forget to write a 1. Line up the numbers vertically in each place.
Calculation of the ones place
 $3 + 9 = 12$

Regroup 1 to the tens place.
Calculation of the tens place
The regrouped 1 and 8 make 9.
 $9 + 4 = 13$

Write a 3 in the tens place.
Write a 1 in the hundreds place.
 $83 + 49 = 132$

Calculate the following problems by using the algorithm.

1 $85 + 49 = 134$

2 $99 + 53 = 152$

60

3 $77 + 88 = 165$

4 $98 + 38 = 136$

5 $75 + 48 = 123$

6 $94 + 77 = 171$

7 $52 + 79 = 131$

8 $16 + 98 = 114$

9 $78 + 87 = 165$

10 $49 + 76 = 125$

11 $46 + 94 = 140$

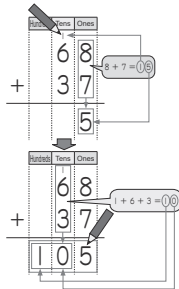
12 $61 + 59 = 120$

13 $97 + 33 = 130$

61

7 - 3 Addition and Subtraction
Addition Algorithm (3)

Example Calculate $68 + 37$ by using the algorithm.



Line up the numbers vertically in each place.

Calculation of the ones place

$$8 + 7 = 15$$

Regroup 1 to the tens place.

Calculation of the tens place

The regrouped 1 and 6 make 7.

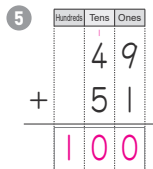
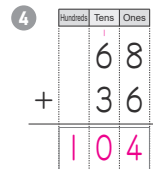
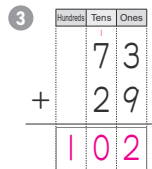
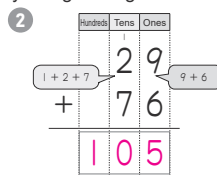
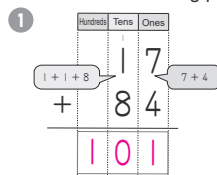
$$7 + 3 = 10$$

Write a 0 in the tens place.

Write a 1 in the hundreds place.

$$68 + 37 = 105$$

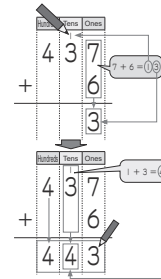
Calculate the following problems by using the algorithm.



62

7 - 4 Addition and Subtraction
Addition Algorithm (4)

Example Calculate $437 + 6$ by using the algorithm.



Line up the numbers vertically in each place.

Calculation of the ones place

$$7 + 6 = 13$$

Regroup 1 to the tens place.

Calculation of the tens place

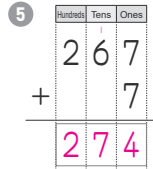
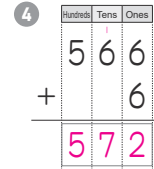
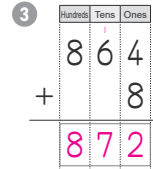
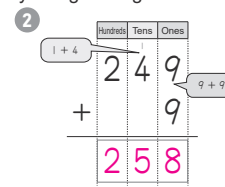
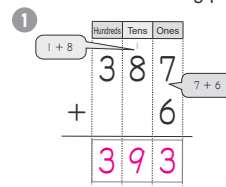
The regrouped 1 and 3 make 4.

Write a 4 in the tens place.

Write a 4 in the hundreds place.

$$437 + 6 = 443$$

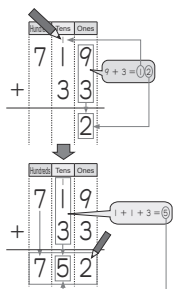
Calculate the following problems by using the algorithm.



63

7 - 5 Addition and Subtraction
Addition Problems (5)

Example Calculate $719 + 33$ by using the algorithm.



Line up the numbers vertically in each place.

Calculation of the ones place

$$9 + 3 = 12$$

Regroup 1 to the tens place.

Calculation of the tens place

The regrouped 1 and 3 make 4.

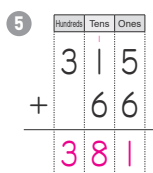
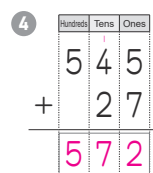
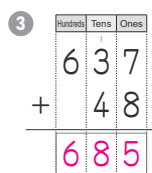
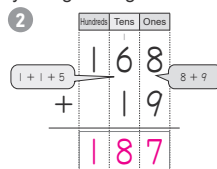
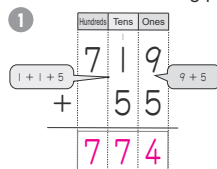
$$4 + 1 = 5$$

Write a 5 in the tens place.

Write a 7 in the hundreds place.

$$719 + 33 = 752$$

Calculate the following problems by using the algorithm.



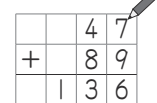
64

7 - 6 Addition and Subtraction
Addition Problems

Example There are 47 red ribbons and 89 white ribbons. How many ribbons are there altogether?

Math Sentence $47 + 89 = 136$

Answer 136 ribbons



1 My friend has 56 pieces of paper. Later, he bought 67 pieces of paper. How many pieces of paper does he have altogether?

Math Sentence $56 + 67 = 123$

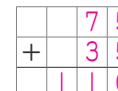
Answer 123 pieces of paper



2 75 boys and 35 girls participated in the school festival. How many children participated in the school festival altogether?

Math Sentence $75 + 35 = 110$

Answer 110 children



3 I read 124 pages of a book yesterday. I read another 37 pages today. How many pages did I read altogether?

Math Sentence $124 + 37 = 161$

Answer 161 pages



65

7 - 7 Addition and Subtraction
Subtraction Algorithm (1)

Example Calculate $125 - 63$ by using the algorithm.

1	2	5
-	6	3
		2

Line up the numbers vertically in each place.

Calculation of the ones place
 $5 - 3 = 2$

Calculation of the tens place
You cannot take 6 from 2, so you need to regroup from the hundreds place.
 $12 - 6 = 6$

Write a 6 in the tens place.

There is nothing in the hundreds place.
 $125 - 63 = 62$

Calculate the following problems by using the algorithm.

1

1	2	5
-	5	3
	7	2

2

1	5	4
-	7	3
	8	1

3

1	2	8
-	3	1
	9	7

4

1	1	9
-	9	6
	2	3

5

1	1	3
-	8	3
	3	0

66

7 - 8 Addition and Subtraction
Subtraction Algorithm (2)

Example Calculate $163 - 79$ by using the algorithm.

1	6	3
-	7	9
	4	

Line up the numbers vertically in each place.

Calculation of the ones place
You need to regroup from the tens place.
 $13 - 9 = 4$

Write a 4 in the ones place.

Calculation of the tens place
Since you regrouped, it became 5. You need to regroup from the hundreds place.
 $15 - 7 = 8$

Write an 8 in the tens place.

There is nothing in the hundreds place.
 $163 - 79 = 84$

Calculate the following problems by using the algorithm.

1

1	6	3
-	8	9
	7	4

2

1	4	2
-	5	4
	8	8

3

1	4	5
-	8	6
	5	9

4

1	3	4
-	4	7
	8	7

5

1	5	0
-	8	9
	6	1

67

7 - 9 Addition and Subtraction
Subtraction Algorithm (3)

Example Calculate $104 - 37$ by using the algorithm.

1	0	4
-	3	7
		7

Line up the numbers vertically in each place.

Calculation of the ones place
You cannot regroup from the tens place, so you need to regroup from the hundreds place first. Then, you need to regroup from the tens place.
 $14 - 7 = 7$

Calculation of the tens place
Since you regrouped, it becomes 9.
 $9 - 3 = 6$

Write a 6 in the tens place.

There is nothing in the hundreds place.
 $104 - 37 = 67$

Calculate the following problems by using the algorithm.

1

1	0	6
-	7	8
	2	8

2

1	0	3
-	5	6
	4	7

3

1	0	4
-	6	5
	3	9

4

1	0	2
-	4	7
	5	5

5

1	0	1
-	5	9
	4	2

68

7 - 10 Addition and Subtraction
Subtraction Algorithm (4)

Example Calculate $282 - 6$ by using the algorithm.

2	8	2
-	6	
	6	

Line up the numbers vertically in each place.

Calculation of the ones place
You need to regroup from the tens place.
 $12 - 6 = 6$

Write a 6 in the ones place.

Calculation of the tens place
Since you regrouped, it becomes 7. Write a 7 in the tens place.

Then, write a 2 in the hundreds place.
 $282 - 6 = 276$

Calculate the following problems by using the algorithm.

1

2	8	2
-	7	
	2	7

2

3	7	5
-	8	
	3	6

3

5	6	7
-	9	
	5	8

4

8	9	2
-	5	
	8	8

5

7	6	4
-	6	
	7	5

69

7 - 11 Addition and Subtraction
Subtraction Algorithm (5)

Example Calculate $271 - 34$ by using the algorithm.

Hundreds	Tens	Ones
2	7	1
-	3	4
2	3	7

Line up the numbers vertically in each place.

Calculation of the ones place
You need to regroup from the tens place.
 $11 - 4 = 7$
Write a 7 in the ones place.

Calculation of the tens place
Since you regrouped, it becomes 6.
 $6 - 3 = 3$
Write a 3 in the tens place.
Then, write a 2 in the hundreds place.
 $271 - 34 = 237$

Calculate the following problems by using the algorithm.

1

2	7	1
-	4	5
2	2	6

2

5	4	6
-	2	7
5	1	9

3

4	4	3
-	2	9
4	1	4

4

3	6	2
-	4	7
3	1	5

5

6	7	0
-	5	6
6	1	4

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7 - 12 Addition and Subtraction
Subtraction Problems

Example There are 126 students in my school. Today 38 students are absent. How many students are in my school today?

Math Sentence $126 - 38 = 88$

Answer **88** students

1	2	6
-	3	8
8	8	

- 1 My sister had 138 pieces of paper. She used 45 of them. How many pieces of paper does she have now?
- Math Sentence $138 - 45 = 93$
- Answer **93** pieces of paper
- | | | | |
|---|---|---|---|
| 1 | 3 | 8 | |
| - | 4 | 5 | |
| | | 9 | 3 |
- 2 My father had 183 stamps. He sold 97 stamps. How many stamps does he have now?
- Math Sentence $183 - 97 = 86$
- Answer **86** stamps
- | | | | |
|---|---|---|---|
| 1 | 8 | 3 | |
| - | 9 | 7 | |
| | | 8 | 6 |
- 3 There are 633 books in the school library. Now 28 books are checked out. How many books are in the library now?
- Math Sentence $633 - 28 = 605$
- Answer **605** books
- | | | |
|---|---|---|
| 6 | 3 | 3 |
| - | 2 | 8 |
| 6 | 0 | 5 |

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7 - 13 Addition and Subtraction
Review

1 Calculate the following problems by using the algorithm.

1 $67 + 41$

6	7	
+	4	1
1	0	8

2 $53 + 84$

5	3	
+	8	4
1	3	7

3 $34 + 70$

3	4	
+	7	0
1	0	4

4 $79 + 53$

7	9	
+	5	3
1	3	2

5 $86 + 76$

8	6	
+	7	6
1	6	2

6 $97 + 89$

9	7	
+	8	9
1	8	6

7 $867 + 4$

8	6	7
+		4
8	7	1

8 $639 + 37$

6	3	9
+	3	7
6	7	6

9 $428 + 24$

4	2	8
+	2	4
4	5	2

2 Calculate the following problems by using the algorithm.

1 $139 - 64$

1	3	9
-	6	4
	7	5

2 $117 - 46$

1	1	7
-	4	6
	7	1

3 $179 - 95$

1	7	9
-	9	5
	8	4

72

4 $145 - 87$

1	4	5
-	8	7
	5	8

5 $136 - 49$

1	3	6
-	4	9
	8	7

6 $175 - 98$

1	7	5
-	9	8
	7	7

7 $102 - 76$

1	0	2
-	7	6
	2	6

8 $961 - 8$

9	6	1
-		8
9	5	3

9 $545 - 27$

5	4	5
-	2	7
5	1	8

3 Answer the following questions.

- 1 In my classroom there are 54 students. In the next classroom there are 47 students. How many students are there in the two classrooms?
- Math Sentence $54 + 47 = 101$
- Answer **101** students
- | | | |
|---|---|---|
| 5 | 4 | |
| + | 4 | 7 |
| 1 | 0 | 1 |
- 2 There were 124 people in the national park today. 58 of them went back. How many people are there in the national park now?
- Math Sentence $124 - 58 = 66$
- Answer **66** people
- | | | |
|---|---|---|
| 1 | 2 | 4 |
| - | 5 | 8 |
| | 6 | 6 |

73

8 - 1 Capacity of Water Litre

Instruction
There are some containers. Which can hold more water?

The plastic bottles are different size. Can we compare?

The amount of liquid that can fit in a container is called the capacity.
To compare the capacity of a container, use a standard container, like 1 L.

1 Litre (1 L) container

Example Measure the capacity of water that the container holds.

It has 10 L

Measure the capacity of water that the following items hold.

- 1 L
- 2 L
- 5 L

8 - 2 Capacity of Water Decilitre

Example 1 Measure the capacity of water in a plastic bottle using a 1 L container.

It has 5 dL.

When you divide 1 L into 10 equal parts, each part is 1 Decilitre (1 dL).
1 L = 10 dL

1 Measure the capacity of water that the following items hold using a 1 L container.

- 3 dL
- 3 L 2 dL

Example 2 Measure the capacity of water that the water container holds using a 1 dL container.

It has 5 dL.

2 Measure the capacity of water that the container holds using a 1 dL container.

- 2 dL
- 4 dL

8 - 3 Capacity of Water Millilitre

Example Measure the capacity of water in a cup using 1 dL container.

It has 350 mL.

When you divide 1 dL into 10 equal parts, each part is 10 Millilitres (mL).
1 dL = 100 mL
1 L = 1000 mL

1 Measure the capacity of water that the following items hold using a 1 dL container.

- 170 mL
- 200 mL
- 240 mL
- 30 mL

2 Match the same capacities with a line.

- 380 mL
- 420 mL
- 60 mL

8 - 4 Capacity of Water Units of Capacity (1)

Example 1 Place the appropriate units in the blanks.

- The amount of water in a plastic bottle 500 mL
- The amount of water in a plastic tank 18 L
- The amount of water in a milk bottle 2 dL

Example 2 Which container holds about 1000 mL?

- Bottle
- Kettle

Bottle holds about 1000 mL.

1 Place the appropriate units in the blanks.

- The amount of water in a plastic bottle 1000 mL
- The amount of water in a cooking pot 5 L
- The amount of water in a milk bottle 2 dL

2 Which container holds about 1500 mL?

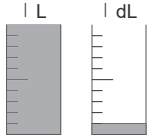
- Milk bottle
- Cup
- Plastic bottle

Plastic bottle holds about 1500 mL.

8 - 5 Capacity of Water
Units of Capacity (2)

Example Fill in the blanks with numbers.

- 1 L = dL
- 1000 mL = L
- 100 mL = dL



Fill in the blanks.

- | | |
|---|---|
| 1 2 L = <input type="text" value="20"/> dL | 2 10 L = <input type="text" value="100"/> dL |
| 3 18 L = <input type="text" value="180"/> dL | 4 3 L = <input type="text" value="3000"/> mL |
| 5 40 dL = <input type="text" value="4"/> L | 6 5 dL = <input type="text" value="500"/> mL |
| 7 120 dL = <input type="text" value="12"/> L | 8 18 dL = <input type="text" value="1800"/> mL |
| 9 5000 mL = <input type="text" value="5"/> L | 10 7000 mL = <input type="text" value="7"/> L |
| 11 900 mL = <input type="text" value="9"/> dL | 12 1000 mL = <input type="text" value="10"/> dL |
| 13 1300 mL = <input type="text" value="13"/> dL | 14 2500 mL = <input type="text" value="25"/> dL |

Depending on where you live, another unit is familiar such as Centilitre, cL.
 1 cL = 10 mL
 100 cL = 1 L
 So, 1 L = 10 dL = 100 cL = 1000 mL.
 Let's find out the kinds of units of capacities around you.



8 - 6 Capacity of Water
Addition and Subtraction of Capacities

Example How much do these two bottles hold altogether? What is the difference in capacity?

$$1 \text{ L } 5 \text{ dL} + 5 \text{ dL} = \boxed{2} \text{ L}$$

$$1 \text{ L } 5 \text{ dL} - 5 \text{ dL} = \boxed{1} \text{ L}$$



Calculate the following.

- | | |
|---|---|
| 1 2 L + 5 L = <input type="text" value="7"/> L | 2 3 dL + 6 dL = <input type="text" value="9"/> dL |
| 3 3 L 6 dL + 2 L = <input type="text" value="5"/> L <input type="text" value="6"/> dL | |
| 4 1 L 7 dL + 8 dL = <input type="text" value="2"/> L <input type="text" value="5"/> dL | |
| 5 500 mL + 350 mL = <input type="text" value="850"/> mL | |
| 6 250 mL + 1 L 500 mL = <input type="text" value="1"/> L <input type="text" value="750"/> mL | |
| 7 7 L - 4 L = <input type="text" value="3"/> L | 8 6 dL - 2 dL = <input type="text" value="4"/> dL |
| 9 4 L 3 dL - 1 L = <input type="text" value="3"/> L <input type="text" value="3"/> dL | |
| 10 2 L 3 dL - 4 dL = <input type="text" value="1"/> L <input type="text" value="9"/> dL | |
| 11 1000 mL - 350 mL = <input type="text" value="650"/> mL | |
| 12 2 L 250 mL - 750 mL = <input type="text" value="1"/> L <input type="text" value="500"/> mL | |

8 - 7 Capacity of Water
Review

1 Match the same capacities with a line.

1		500 mL
2		1 L 30 mL
3		240 mL

2 Which container holds about 1000 mL?

- | | | |
|---|---|---|
| 1 | 2 | 3 |
|---|---|---|
- Milk carton** holds about 1000 mL.

3 Fill in the blanks.

- | | |
|--|---|
| 1 4 L = <input type="text" value="40"/> dL | 2 5 L = <input type="text" value="5000"/> mL |
| 3 30 dL = <input type="text" value="3"/> L | 4 1 L 2 dL = <input type="text" value="1200"/> mL |
| 5 1000 mL = <input type="text" value="1"/> L | 6 1300 mL = <input type="text" value="13"/> dL |

4 Calculate the following.

- | | |
|---|---|
| 1 3 L + 2 L = <input type="text" value="5"/> L | 2 12 L - 3 L = <input type="text" value="9"/> L |
| 3 1 L + 2 L 500 mL = <input type="text" value="3"/> L <input type="text" value="500"/> mL | |
| 4 1100 mL - 400 mL = <input type="text" value="700"/> mL | |

9 - 1 Triangles and Quadrilaterals
Straight Lines

Instruction How to draw a straight line using a ruler

1. Place and hold the ruler under the two points. 	2. Draw a line to connect the two points.
---	---

Example Bound the following pair of points to draw lines by using a ruler.

1 AB	2 CD	3 EF
------	------	------

When you draw a straight line, make sure to press the ruler firmly.

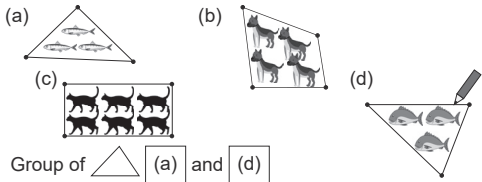
Bound the following pair of points to draw lines by using a ruler.

1 AB	2 CD	3 EF
------	------	------

4 GH	5 IJ	6 KL
------	------	------

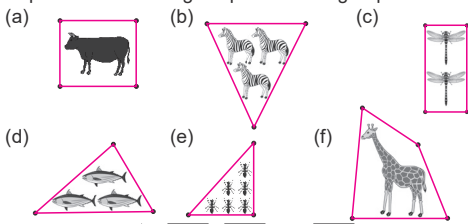
9 - 2 Triangles and Quadrilaterals
Finding Triangles and Quadrilaterals

Example Connect the dots to enclose the same animals into groups. Separate the resulting shapes into two groups.



Group of (a) and (d)
Group of (b) and (c)

Connect the dots to enclose the same animals into groups. Separate the resulting shapes into two groups.



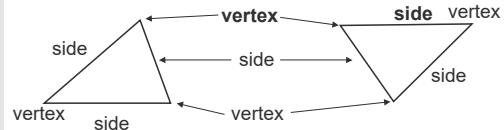
Group of (b), (d), and (e)
Group of (a), (c), and (f)

- A closed shape made of three straight lines is called a **triangle**.
- A closed shape made of four straight lines is called a **quadrilateral**.

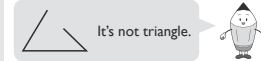
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9 - 3 Triangles and Quadrilaterals
Triangles

Instruction Triangles



- Each straight line that makes a triangle is called a side.
- Each point where the sides meet is called a vertex.
- Triangles have 3 sides and 3 vertices.



Example Answer the following questions.

- How many vertices does a triangle have?
- Find the triangles. 3 vertices.
 (a) (b) (c) (a) is triangle.

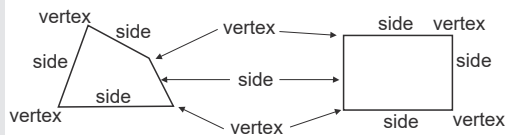
- How many sides and vertexes do triangles have?
Triangles have sides and vertexes.

- Find the triangles.
 (a) (b) (c) (d) (e) (f)
 (a), (c), and (e) are triangles.

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9 - 4 Triangles and Quadrilaterals
Quadrilaterals

Instruction Quadrilaterals



Quadrilaterals have 4 sides and 4 vertices.

This is not a quadrilateral.

Example Answer the following questions.

- How many vertices does a quadrilateral have?
- Find the quadrilaterals. vertexes.
 (a) (b) (c) (c) is quadrilateral.

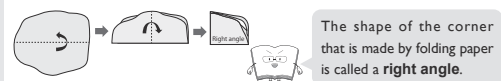
- How many sides and vertexes do quadrilaterals have?
Quadrilaterals have sides and vertexes.

- Find the quadrilaterals.
 (a) (b) (c) (d) (e) (f)
 (a), (d), (e), and (f) are quadrilaterals.

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9 - 5 Triangles and Quadrilaterals
Right Angle

Instruction Make a right angle by folding a piece of paper.



See if the shape of the corner of your notebook has a right angle.

Place the paper onto the corner of your notebook to check if they are the same as each other.

Example Which of the following has a right angle? Find a right angle by placing the folded paper.

- (a)
 - (b)
 - (c)
- (b) has a right angle.

Place the folded paper onto the shape and check if they match each other or not.

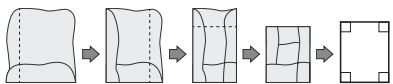
Which of the following is a right angle? Find a right angle by placing the folded paper.

- (a)
 - (b)
 - (c)
 - (d)
- (b) and (d)

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9 - 6 Triangles and Quadrilaterals
Rectangles

Instruction Make a rectangle by folding a piece of paper.



A quadrilateral with four right angles is called **rectangle**.

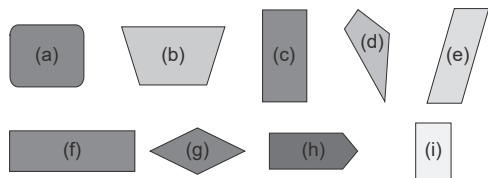
This mark indicates a right angle.

Example 1 Find the rectangle.



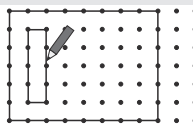
How many right angles do they have? (c) is rectangle.

1 Find the rectangles.



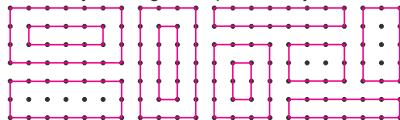
(c), (f), and (i) are rectangles.

Example 2 Draw 2 rectangles by connecting the dots.

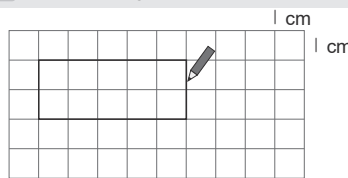


You can also draw a rectangle inside of another one. The answer is not one.

2 Draw as many rectangles as possible by connecting the dots.

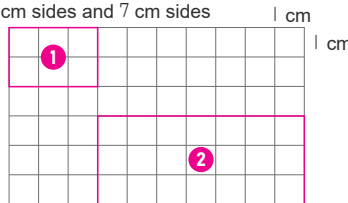


Example 3 Draw a rectangle with 5 cm sides and 2 cm sides.



3 Draw the following rectangles.

- 1 with 2 cm sides and 3 cm sides
- 2 with 3 cm sides and 7 cm sides



9 - 7 Triangles and Quadrilaterals
Squares

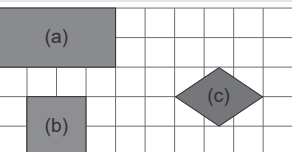
Instruction Make a square by folding and cutting a piece of paper.



Fold a rectangular paper and cut it like above. The mark indicates the lines are the same length.

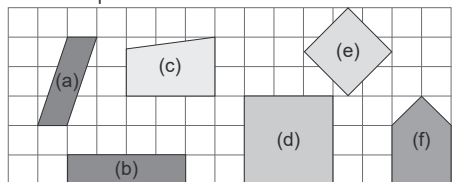
A quadrilateral with four right angles and four equal sides is called a **square**.

Example 1 Find the square.



(b) is square.

1 Find the square.



(d) and (e) are squares.

Example 2 Make a patterns by drawing and .



This pattern is made by alternating black and white. But, the answer is not one.

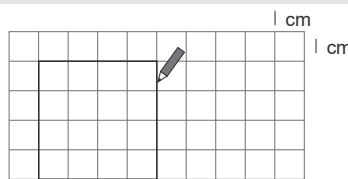
2 Make a patterns by drawing and .



The answer is not one. Let's take a look at the patterns made by friends.

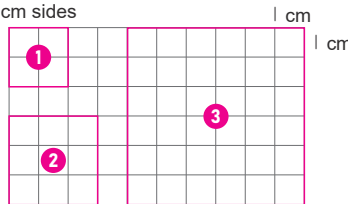


Example 3 Draw a square with 4 cm sides.



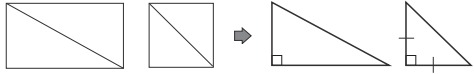
3 Draw the following squares.

- 1 with 2 cm sides
- 2 with 3 cm sides
- 3 with 6 cm sides



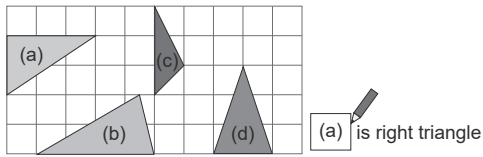
9 - 8 Triangles and Quadrilaterals
Right Triangles

Instruction What is a right triangle?



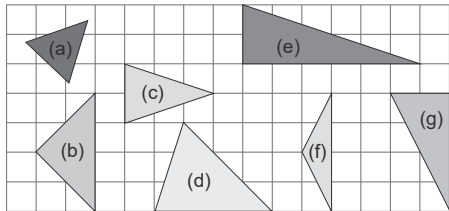
A triangle with one right angle is called a **right triangle**.

Example 1 Find right triangle.



(a) is right triangle

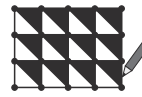
1 Find right triangles.



(b), (e), and (g) are right triangles.

90

Example 2 Make a patterns by drawing and .



The answer is not one. Let's take a look at the patterns made by friends.



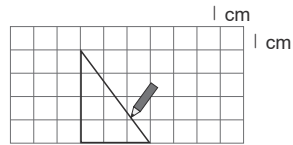
2 Make a patterns by drawing and .



The answer is not one. Let's take a look at the patterns made by friends.

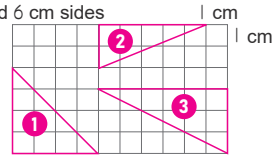


Example 3 Draw a right triangle with 4 cm and 3 cm sides that form a right angle.



3 Draw right triangles with the following sides that form a right angle.

- 1 with 4 cm and 4 cm sides that form a right angle
- 2 with 2 cm and 5 cm sides
- 3 with 3 cm and 6 cm sides



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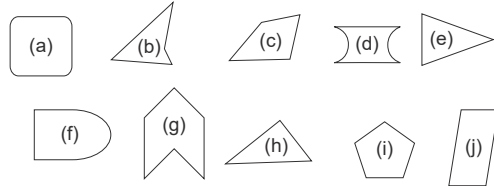
9 - 9 Triangles and Quadrilaterals
Review

1 How many sides and vertexes do triangles and quadrilaterals have?

Triangles have **3** sides and **3** vertexes.

Quadrilaterals have **4** sides and **4** vertexes.

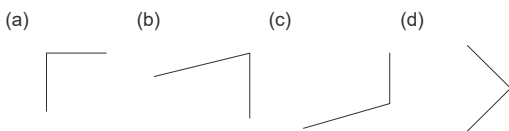
2 Find the triangles and the quadrilaterals.



Triangles are **(e) and (h)**

Quadrilaterals are **(b), (c), and (j)**

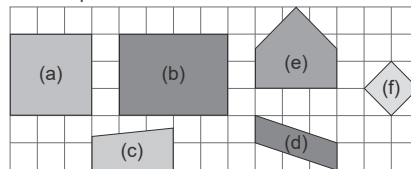
3 Which of the following is a right angle?



(a) and (d)

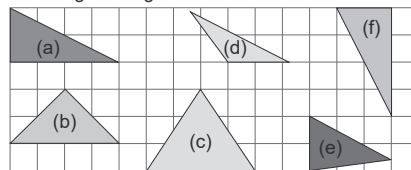
92

4 Find the square.



(a) and (f) are square.

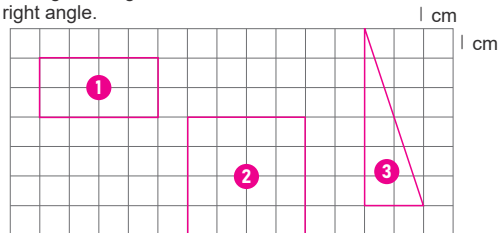
5 Find the right triangles.



(a), (b), and (f) are right triangles.

6 Draw the following shapes on the grid below.

- 1 A rectangle with 2 cm sides and 4 cm sides.
- 2 A square with 4 cm sides.
- 3 A right triangle with 2 cm and 6 cm sides that form a right angle.



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10-1 Multiplication-1
Meaning of Multiplication (1)

Example Look at the following picture and answer the following questions.



- How many oranges are there on the plates? oranges
- How many oranges are there on one plate? oranges
- How many plates are there? plates
- There are oranges on one plate and there are plates. There are oranges altogether.

In the above situation, we can make the following math sentences:

$$3 \times 4 = 12$$

Look at the following pictures and answer the questions.

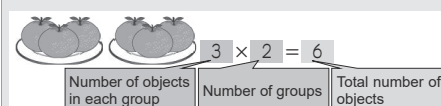


- How many bottles are there in the boxes? bottles
- How many bottles are there in one box? bottles
- How many boxes are there? boxes
- There are bottles in one box and there are boxes. There are bottles altogether.

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10-2 Multiplication-1
Meaning of Multiplication (2)

Instruction There are three oranges on a plate. There are two plates. There are 6 oranges altogether. You can write this using the following math sentence.



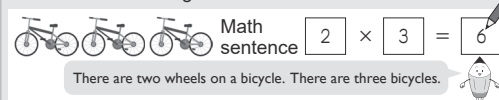
How to read: Three multiplied by two equals six.

This is a very important concept.

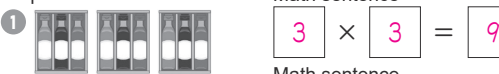
- Write the multiplication symbol.



Example Write a multiplication math sentence for calculating the number of wheels.



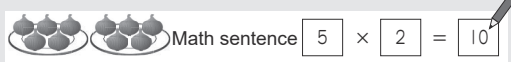
- Write multiplication math sentences for the following problems.



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10-3 Multiplication-1
Multiplication Facts of 5 (1)

Example There are 5 onions on one plate. There are 2 plates. How many onions are there altogether? Write a math sentence and find the answer.



Five sweets are included in one box. Write multiplication math sentences and find the answers.

- 1 box $5 \times 1 = 5$
- 2 boxes $5 \times 2 = 10$
- 3 boxes $5 \times 3 = 15$
- 4 boxes $5 \times 4 = 20$
- There are 5 sweets in one box. There are 5 boxes. $5 \times 5 = 25$
- There are 5 sweets in one box. There are 6 boxes. $5 \times 6 = 30$
- There are 5 sweets in one box. There are 7 boxes. $5 \times 7 = 35$
- There are 5 sweets in one box. There are 8 boxes. $5 \times 8 = 40$
- There are 5 sweets in one box. There are 9 boxes. $5 \times 9 = 45$

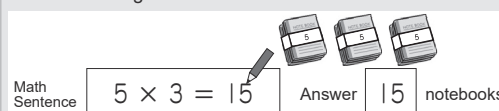
x	1	2	3	4	5	6	7	8	9
5	5	10	15	20	25	30	35	40	45

This table shows the multiplication facts of 5.

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10-4 Multiplication-1
Multiplication Facts of 5 (2)

Example There are 5 notebooks in one set. There are 3 sets. How many notebooks are there altogether?




Read the following questions. Write the math sentences and find the answers.

- There are 5 biscuits on one plate. There are 5 plates. How many biscuits are there altogether?
Math Sentence: $5 \times 5 = 25$ Answer: biscuits
- There are 5 pieces of cake in each box. There are 6 boxes. How many pieces of cake are there altogether?
Math Sentence: $5 \times 6 = 30$ Answer: pieces of cake
- Five people are in each car. There are 4 cars. How many people are there altogether?
Math Sentence: $5 \times 4 = 20$ Answer: people
- There are 9 children. My mother will give 5 pieces of candy to each child. How many pieces of candy does she need?
Math Sentence: $5 \times 9 = 45$ Answer: pieces of candy





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10 - 5 Multiplication-1
Multiplication Facts of 2 (1)

Example There are 2 onions on one plate. There are 3 plates. How many onions are there altogether? Write a math sentence and find the answer.

 Math sentence $2 \times 3 = 6$

A bicycle has 2 wheels. How many wheels are there? Write multiplication math sentences and find the answers.


-  1 bicycle $2 \times 1 = 2$
-  2 bicycles $2 \times 2 = 4$
-  3 bicycles $2 \times 3 = 6$
-  4 bicycles $2 \times 4 = 8$
- There are 5 bicycles. How many wheels are there altogether? $2 \times 5 = 10$
- There are 6 bicycles. How many wheels are there altogether? $2 \times 6 = 12$
- There are 7 bicycles. How many wheels are there altogether? $2 \times 7 = 14$
- There are 8 bicycles. How many wheels are there altogether? $2 \times 8 = 16$
- There are 9 bicycles. How many wheels are there altogether? $2 \times 9 = 18$

×	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18



Can you say the multiplication facts of 2 from $2 \times 9, 2 \times 8, \dots$?

10 - 6 Multiplication-1
Multiplication Facts of 2 (2)

Example There are 2 pens in one set. There are 4 sets. How many pens are there altogether?

 Math Sentence $2 \times 4 = 8$ Answer 8 pens

Read the following questions. Write the math sentences and find the answers.

- There are 2 donuts on one plate. There are 7 plates. How many donuts are there altogether? 
Math Sentence $2 \times 7 = 14$ Answer 14 donuts
- There are 2 fish in each tank. There are 5 tanks. How many fish are there altogether? 
Math Sentence $2 \times 5 = 10$ Answer 10 fish
- There are 2 computers on each desk. There are 9 desks. How many computers are there altogether?
Math Sentence $2 \times 9 = 18$ Answer 18 computers
- There are 3 boats. Two people are in each boat. How many people are there in the boats altogether?
Math Sentence $2 \times 3 = 6$ Answer 6 people

10 - 7 Multiplication-1
Multiplication Facts of 5 and 2

1 The following tables show the multiplication facts of 5 and 2. Write the numbers in the \square .

×	1	2	3	4	5	6	7	8	9
5	5	10	15	20	25	30	35	40	45
2	2	4	6	8	10	12	14	16	18

Example Calculate the following multiplications.

- $5 \times 7 = 35$
- $2 \times 8 = 16$

2 Calculate the following multiplications. You can do 1, 3, 6... Hide the answers and practice them again and again.





- $5 \times 3 = 15$
- $2 \times 4 = 8$
- $5 \times 7 = 35$
- $2 \times 1 = 2$
- $5 \times 5 = 25$
- $2 \times 5 = 10$
- $5 \times 2 = 10$
- $2 \times 7 = 14$
- $5 \times 1 = 5$
- $2 \times 2 = 4$
- $5 \times 6 = 30$
- $2 \times 6 = 12$
- $5 \times 8 = 40$
- $2 \times 3 = 6$
- $5 \times 4 = 20$
- $2 \times 9 = 18$
- $5 \times 9 = 45$
- $2 \times 8 = 16$

10 - 8 Multiplication-1
Multiplication Facts of 3 (1)

Example There are 3 eggs in one basket. There are 4 baskets. How many eggs are there altogether? Write a math sentence and find the answer.

 Math sentence $3 \times 4 = 12$

There are 3 sweets in one box. How many sweets are there? Write multiplication math sentences and find the answers.


-  1 box $3 \times 1 = 3$
-  2 boxes $3 \times 2 = 6$
-  3 boxes $3 \times 3 = 9$
-  4 boxes $3 \times 4 = 12$
- There are 5 boxes. How many sweets are there altogether? $3 \times 5 = 15$
- There are 6 boxes. How many sweets are there altogether? $3 \times 6 = 18$
- There are 7 boxes. How many sweets are there altogether? $3 \times 7 = 21$
- There are 8 boxes. How many sweets are there altogether? $3 \times 8 = 24$
- There are 9 boxes. How many sweets are there altogether? $3 \times 9 = 27$

×	1	2	3	4	5	6	7	8	9
3	3	6	9	12	15	18	21	24	27

Let's have a problem with friends, like "what is the answer to 3×5 ?"

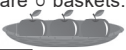

10 - 9 Multiplication-1
Multiplication Facts of 3 (2)

Example There are 3 bottles in a box. There are 5 boxes. How many bottles are there altogether?



Math Sentence $3 \times 5 = 15$ Answer 15 bottles


Read the following questions. Write the math sentences and find the answers.

- There are 3 apples in a basket. There are 6 baskets. How many apples are there altogether?

 Math Sentence $3 \times 6 = 18$ Answer 18 apples
- There are 3 pencils in each case. There are 7 cases. How many pencils are there altogether?

 Math Sentence $3 \times 7 = 21$ Answer 21 pencils
- There are 3 bulbs planted in each pot. There are 9 pots. How many bulbs are planted altogether?
 Math Sentence $3 \times 9 = 27$ Answer 27 bulbs
- There are 8 children. I will give 3 pieces of candy to each child. How many pieces of candy do I need?
 Math Sentence $3 \times 8 = 24$ Answer 24 pieces of candy

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10 - 10 Multiplication-1
Multiplication Facts of 4 (1)

Example There are 4 eggs in a basket. There are 3 baskets. How many eggs are there altogether? Write a math sentence and find the answer.




Math sentence $4 \times 3 = 12$

A truck has 4 tires. How many tires are there? Write multiplication math sentences and find the answers.

-  1 truck $4 \times 1 = 4$
-  2 trucks $4 \times 2 = 8$
-  3 trucks $4 \times 3 = 12$
-  4 trucks $4 \times 4 = 16$
- There are 5 trucks. How many tires are there altogether? $4 \times 5 = 20$
- There are 6 trucks. How many tires are there altogether? $4 \times 6 = 24$
- There are 7 trucks. How many tires are there altogether? $4 \times 7 = 28$
- There are 8 trucks. How many tires are there altogether? $4 \times 8 = 32$
- There are 9 trucks. How many tires are there altogether? $4 \times 9 = 36$


×	1	2	3	4	5	6	7	8	9
4	4	8	12	16	20	24	28	32	36

In the group, let's have a problem. Who can give the correct answer fast? 

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10 - 11 Multiplication-1
Multiplication Facts of 4 (2)

Example There are 4 rolls of toilet paper in one set. There are 5 sets. How many rolls of toilet paper are there altogether?



Math Sentence $4 \times 5 = 20$ Answer 20 rolls of toilet paper

Read the following questions. Write the math sentences and find the answers.

- There are 4 chocolates in a box. There are 6 boxes. How many chocolates are there altogether?

 Math Sentence $4 \times 6 = 24$ Answer 24 chocolates
- There are 4 eggs in each package. There are 4 packages. How many eggs are there altogether?

 Math Sentence $4 \times 4 = 16$ Answer 16 eggs
- There are 4 students in each group. There are 9 groups. How many students are there altogether?
 Math Sentence $4 \times 9 = 36$ Answer 36 students
- I bought 8 packages of batteries. There are 4 batteries in each package. How many batteries are there altogether?
 Math Sentence $4 \times 8 = 32$ Answer 32 batteries

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10 - 12 Multiplication-1
Multiplication Facts of 2 and 3

1 The following table shows the multiplication facts of 2 and 3. Write the numbers in the \square .

×	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27

Example Calculate the following multiplications.

1 $2 \times 7 = 14$ 2 $3 \times 8 = 24$

2 Calculate the following multiplications. You can do 1, 3, 6... Let's practice them until you can say them smoothly. 

- $2 \times 3 = 6$
- $3 \times 4 = 12$
- $2 \times 7 = 14$
- $3 \times 1 = 3$
- $2 \times 5 = 10$
- $3 \times 5 = 15$
- $2 \times 2 = 4$
- $3 \times 7 = 21$
- $2 \times 1 = 2$
- $3 \times 2 = 6$
- $2 \times 6 = 12$
- $3 \times 6 = 18$
- $2 \times 8 = 16$
- $3 \times 3 = 9$
- $2 \times 4 = 8$
- $3 \times 9 = 27$
- $2 \times 9 = 18$
- $3 \times 8 = 24$

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10-13 Multiplication-I
Multiplication Facts of 2, 3 and 5

1 The following table shows the multiplication facts of 2, 3 and 5. Write the numbers in the .

×	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
5	5	10	15	20	25	30	35	40	45

2 What can we find from the above table showing the multiplication facts of 2, 3 and 5.

You can find a very interesting fact!

When each result of the multiplication facts of 2 and 3 are added, these additions become the result of the multiplication facts of 5.

3 Calculate the following multiplications.

- 1 $2 \times 1 = 2$ 2 $5 \times 5 = 25$ 3 $3 \times 1 = 3$
 4 $3 \times 2 = 6$ 5 $2 \times 2 = 4$ 6 $5 \times 3 = 15$
 7 $5 \times 4 = 20$ 8 $3 \times 3 = 9$ 9 $2 \times 3 = 6$
 10 $5 \times 2 = 10$ 11 $2 \times 4 = 8$ 12 $3 \times 4 = 12$
 13 $2 \times 5 = 10$ 14 $3 \times 5 = 15$ 15 $5 \times 1 = 5$

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10-14 Multiplication-I
Multiplication Facts of 2 and 4

1 The following table shows the multiplication facts of 2 and 4. Write the numbers in the .

×	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
4	4	8	12	16	20	24	28	32	36

2 What can we find from the above table showing the multiplication facts of 2 and 4.

You can find a very interesting fact!

When each result of the multiplication facts of 2 is doubled, each of them becomes the result of the multiplication facts of 4.

3 Calculate the following multiplications.

- 1 $2 \times 3 = 6$ 2 $4 \times 2 = 8$
 3 $4 \times 1 = 4$ 4 $2 \times 4 = 8$
 5 $2 \times 5 = 10$ 6 $4 \times 3 = 12$
 7 $4 \times 4 = 16$ 8 $2 \times 1 = 2$
 9 $2 \times 2 = 4$ 10 $4 \times 6 = 24$
 11 $4 \times 5 = 20$ 12 $2 \times 6 = 12$

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10-15 Multiplication-I
Multiplication Facts of 3 and 4

1 The following table shows the multiplication facts of 3 and 4. Write the numbers in the .

×	1	2	3	4	5	6	7	8	9
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36

Example Calculate the following multiplications.

- 1 $3 \times 5 = 15$ 2 $4 \times 2 = 8$

2 Calculate the following multiplications.

You can do 1, 3, 5...
Let's repeat them so that you can master them completely.

- 1 $3 \times 5 = 15$ 2 $4 \times 2 = 8$
 3 $3 \times 8 = 24$ 4 $4 \times 9 = 36$
 5 $3 \times 3 = 9$ 6 $4 \times 4 = 16$
 7 $3 \times 2 = 6$ 8 $4 \times 7 = 28$
 9 $3 \times 6 = 18$ 10 $4 \times 5 = 20$
 11 $3 \times 1 = 3$ 12 $4 \times 6 = 24$
 13 $3 \times 7 = 21$ 14 $4 \times 8 = 32$
 15 $3 \times 9 = 27$ 16 $4 \times 1 = 4$
 17 $3 \times 4 = 12$ 18 $4 \times 3 = 12$





108

10-16 Multiplication-I
Review

1 The following is a multiplication table. Write the numbers in the blanks.

×	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45

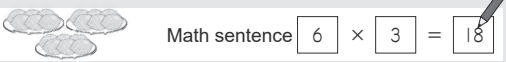
2 Read the following questions. Write the math sentences and find the answers.

- 1 There are 2 peanuts in each bag. There are 8 bags. How many peanuts are there altogether?
 Math Sentence $2 \times 8 = 16$ Answer 16 peanuts 
- 2 There are 3 bananas on each plate. There are 7 plates. How many bananas are there altogether?
 Math Sentence $3 \times 7 = 21$ Answer 21 bananas 
- 3 A car has 4 tires. There are 6 cars. How many tires are there altogether?
 Math Sentence $4 \times 6 = 24$ Answer 24 tires 
- 4 There are 4 children. My father will give 5 pencils to each child. How many pencils does he need?
 Math Sentence $5 \times 4 = 20$ Answer 20 pencils 

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11 - 1 Multiplication-2
Multiplication Facts of 6 (1)

Example There are 6 lemons on one plate. There are 3 plates. How many lemons are there altogether? Write a math sentence and find the answer.



There are 6 chocolates in one box. Write multiplication math sentences and find the answers.

- 1 box $6 \times 1 = 6$
- 2 boxes $6 \times 2 = 12$
- 3 boxes $6 \times 3 = 18$
- 4 boxes $6 \times 4 = 24$
- There are 6 chocolates in one box. There are 5 boxes. $6 \times 5 = 30$
- There are 6 chocolates in one box. There are 6 boxes. $6 \times 6 = 36$
- There are 6 chocolates in one box. There are 7 boxes. $6 \times 7 = 42$
- There are 6 chocolates in one box. There are 8 boxes. $6 \times 8 = 48$
- There are 6 chocolates in one box. There are 9 boxes. $6 \times 9 = 54$

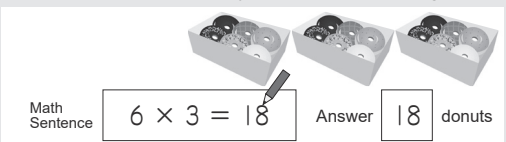
×	1	2	3	4	5	6	7	8	9
6	6	12	18	24	30	36	42	48	54

Can you say the multiplication facts of 6 from $6 \times 9, 6 \times 8, \dots$?

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11 - 2 Multiplication-2
Multiplication Facts of 6 (2)

Example There are 6 donuts in one box. There are 3 boxes. How many donuts are there altogether?



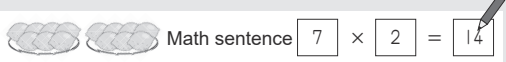
Read the following questions. Write the math sentences and find the answers.

- There are 6 eggs in one package. There are 5 packages. How many eggs are there altogether?
Math Sentence $6 \times 5 = 30$ Answer **30** eggs
- There are 6 apples in each box. There are 7 boxes. How many apples are there altogether?
Math Sentence $6 \times 7 = 42$ Answer **42** apples
- Six students make one group. There are 8 groups. How many students are there altogether?
Math Sentence $6 \times 8 = 48$ Answer **48** students
- There are 3 children. Each child has 6 pieces of candy. How many pieces of candy are there altogether?
Math Sentence $6 \times 3 = 18$ Answer **18** pieces of candy

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11 - 3 Multiplication-2
Multiplication Facts of 7 (1)

Example There are 7 lemons on one plate. There are 2 plates. How many lemons are there altogether? Write a math sentence and find the answer.



Seven pens are sold in one set. How many pens are there? Write multiplication math sentences and find the answers.

- 1 set $7 \times 1 = 7$
- 2 sets $7 \times 2 = 14$
- 3 sets $7 \times 3 = 21$
- 4 sets $7 \times 4 = 28$
- There are 5 sets. How many pens are there altogether? $7 \times 5 = 35$
- There are 6 sets. How many pens are there altogether? $7 \times 6 = 42$
- There are 7 sets. How many pens are there altogether? $7 \times 7 = 49$
- There are 8 sets. How many pens are there altogether? $7 \times 8 = 56$
- There are 9 sets. How many pens are there altogether? $7 \times 9 = 63$

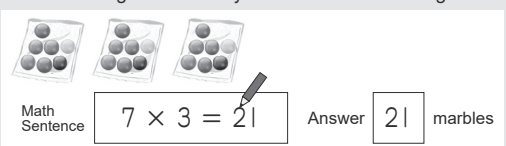
×	1	2	3	4	5	6	7	8	9
7	7	14	21	28	35	42	49	56	63

Let's have a problem with friends, like "what is the answer to 7×8 ?"

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11 - 4 Multiplication-2
Multiplication Facts of 7 (2)

Example There are 7 marbles in each bag. There are 3 bags. How many marbles are there altogether?



Read the following questions. Write the math sentences and find the answers.

- There are 7 fish in each tank. There are 8 tanks. How many fish are there altogether?
Math Sentence $7 \times 8 = 56$ Answer **56** fish
- There are 7 pieces of cakes in each box. There are 4 boxes. How many pieces of cake are there altogether?
Math Sentence $7 \times 4 = 28$ Answer **28** pieces of cake
- There are 7 mangoes in each basket. There are 5 baskets. How many mangoes are there altogether?
Math Sentence $7 \times 5 = 35$ Answer **35** mangoes
- There are 3 fishing boats. Seven fishermen are in each fishing boat. How many fishermen are there altogether?
Math Sentence $7 \times 3 = 21$ Answer **21** fishermen

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11 - 5 Multiplication-2
Multiplication Facts of 6 and 7

1 The following tables show the multiplication facts of 6 and 7. Write the numbers in the .

×	1	2	3	4	5	6	7	8	9
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63

Example Calculate the following multiplications.

1 $6 \times 3 = 18$ 2 $7 \times 4 = 28$

2 Calculate the following multiplications.

- | | |
|----------------------|----------------------|
| 1 $6 \times 3 = 18$ | 2 $7 \times 4 = 28$ |
| 3 $6 \times 7 = 42$ | 4 $7 \times 1 = 7$ |
| 5 $6 \times 5 = 30$ | 6 $7 \times 5 = 35$ |
| 7 $6 \times 2 = 12$ | 8 $7 \times 7 = 49$ |
| 9 $6 \times 1 = 6$ | 10 $7 \times 2 = 14$ |
| 11 $6 \times 6 = 36$ | 12 $7 \times 6 = 42$ |
| 13 $6 \times 8 = 48$ | 14 $7 \times 3 = 21$ |
| 15 $6 \times 4 = 24$ | 16 $7 \times 9 = 63$ |
| 17 $6 \times 9 = 54$ | 18 $7 \times 8 = 56$ |

You can do 1, 3, 5... If you practice them repeatedly, you will surely be able to say them smoothly.



11 - 6 Multiplication-2
Multiplication Facts of 8 (1)

Example There are 8 carrots in one basket. There are 2 baskets. How many carrots are there altogether? Write a math sentence and find the answer.

Math sentence $8 \times 2 = 16$

There are 8 pieces of bread in one package. How many pieces of bread are there? Write multiplication math sentences and find the answers.

- | | |
|---|-------------------|
| 1 1 package | $8 \times 1 = 8$ |
| 2 2 packages | $8 \times 2 = 16$ |
| 3 3 packages | $8 \times 3 = 24$ |
| 4 4 packages | $8 \times 4 = 32$ |
| 5 There are 5 packages.
How many pieces of bread are there altogether? | $8 \times 5 = 40$ |
| 6 There are 6 packages.
How many pieces of bread are there altogether? | $8 \times 6 = 48$ |
| 7 There are 7 packages.
How many pieces of bread are there altogether? | $8 \times 7 = 56$ |
| 8 There are 8 packages.
How many pieces of bread are there altogether? | $8 \times 8 = 64$ |
| 9 There are 9 packages.
How many pieces of bread are there altogether? | $8 \times 9 = 72$ |

×	1	2	3	4	5	6	7	8	9
8	8	16	24	32	40	48	56	64	72

Let's have a problem with friends, like "what is the answer to 8×5 ?"



11 - 7 Multiplication-2
Multiplication Facts of 8 (2)

Example There are 8 cans of juice in one box. There are 3 sets. How many cans of juice are there altogether?

Math Sentence $8 \times 3 = 24$ Answer 24 cans of juice

Read the following questions. Write the math sentences and find the answers.

- | | | |
|---|---------------------------------|-------------------|
| 1 There are 8 buttons in one package. There are 6 packages. How many buttons are there altogether? | Math Sentence $8 \times 6 = 48$ | Answer 48 buttons |
| 2 There are 8 pencils in each case. There are 5 cases. How many pencils are there altogether? | Math Sentence $8 \times 5 = 40$ | Answer 40 pencils |
| 3 There are 8 photos on each page of the album. This album has 7 pages. How many photos are there in this album altogether? | Math Sentence $8 \times 7 = 56$ | Answer 56 photos |
| 4 There are 4 boats. Eight people are in each boat. How many people are on the boats altogether? | Math Sentence $8 \times 4 = 32$ | Answer 32 people |

11 - 8 Multiplication-2
Multiplication Facts of 9 (1)

Example There are 9 carrots in one basket. There are 2 baskets. How many carrots are there altogether? Write a math sentence and find the answer.

Math sentence $9 \times 2 = 18$

There are 9 chocolates in one box. How many chocolates are there? Write multiplication math sentences and find the answers.

- | | |
|---|-------------------|
| 1 1 box | $9 \times 1 = 9$ |
| 2 2 boxes | $9 \times 2 = 18$ |
| 3 3 boxes | $9 \times 3 = 27$ |
| 4 4 boxes | $9 \times 4 = 36$ |
| 5 There are 5 boxes.
How many chocolates are there altogether? | $9 \times 5 = 45$ |
| 6 There are 6 boxes.
How many chocolates are there altogether? | $9 \times 6 = 54$ |
| 7 There are 7 boxes.
How many chocolates are there altogether? | $9 \times 7 = 63$ |
| 8 There are 8 boxes.
How many chocolates are there altogether? | $9 \times 8 = 72$ |
| 9 There are 9 boxes.
How many chocolates are there altogether? | $9 \times 9 = 81$ |

×	1	2	3	4	5	6	7	8	9
9	9	18	27	36	45	54	63	72	81

In the group, let's have a problem. Who can give the correct answer fast?



11 - 9 Multiplication-2
Multiplication Facts of 9 (2)

Example There are 9 sweets in one box. There are 3 boxes. How many sweets are there altogether?

Math Sentence $9 \times 3 = 27$ Answer 27 sweets

Read the following questions. Write the math sentences and find the answers.

1 Nine people are lined up in each row. There are 2 rows. How many people are there altogether?

Math Sentence $9 \times 2 = 18$ Answer 18 people

2 There are 9 marbles in each package. There are 5 packages. How many marbles are there altogether?

Math Sentence $9 \times 5 = 45$ Answer 45 marbles

3 There are 9 students in each group. There are 6 groups. How many students are there altogether?

Math Sentence $9 \times 6 = 54$ Answer 54 students

4 There are 4 boats in the sea. Nine people are on each boat. How many people are there on the boats altogether?

Math Sentence $9 \times 4 = 36$ Answer 36 people

11 - 10 Multiplication-2
Multiplication Facts of 1

Example There is 1 carrot on one plate. There are 3 plates. How many carrots are there altogether? Write a math sentence and find the answer.

Math sentence $1 \times 3 = 3$

There is 1 melon in one box. Write multiplication math sentences and find the answers.

1 1 box $1 \times 1 = 1$

2 2 boxes $1 \times 2 = 2$

3 3 boxes $1 \times 3 = 3$

4 4 boxes $1 \times 4 = 4$

5 There is 1 melon in one box. There are 5 boxes. $1 \times 5 = 5$

6 There is 1 melon in one set. There are 6 boxes. $1 \times 6 = 6$

7 There is 1 melon in one set. There are 7 boxes. $1 \times 7 = 7$

8 There is 1 melon in one set. There are 8 boxes. $1 \times 8 = 8$

9 There is 1 melon in one set. There are 9 boxes. $1 \times 9 = 9$

×	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9

The multiplication facts of 1 is very easy, isn't it?

11 - 11 Multiplication-2
Multiplication Facts of 8 and 9

1 The following table shows the multiplication facts of 8 and 9. Write the numbers in the \square .

×	1	2	3	4	5	6	7	8	9
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

Example Calculate the following multiplications.

1 $8 \times 3 = 24$ 2 $9 \times 5 = 45$

2 Calculate the following multiplications.

- 1 $8 \times 3 = 24$
- 2 $9 \times 4 = 36$
- 3 $8 \times 7 = 56$
- 4 $9 \times 1 = 9$
- 5 $8 \times 5 = 40$
- 6 $9 \times 5 = 45$
- 7 $8 \times 2 = 16$
- 8 $9 \times 7 = 63$
- 9 $8 \times 1 = 8$
- 10 $9 \times 2 = 18$
- 11 $8 \times 6 = 48$
- 12 $9 \times 6 = 54$
- 13 $8 \times 8 = 64$
- 14 $9 \times 3 = 27$
- 15 $8 \times 4 = 32$
- 16 $9 \times 9 = 81$
- 17 $8 \times 9 = 72$
- 18 $9 \times 8 = 72$

You can do 1, 3, 5... Let's practice them many times.

11 - 12 Multiplication-2
Multiplication Facts of 7 and 8

1 The following table shows the multiplication facts of 7 and 8. Write the numbers in the \square .

×	1	2	3	4	5	6	7	8	9
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72

Example Calculate the following multiplications.

1 $7 \times 5 = 35$ 2 $8 \times 2 = 16$

2 Calculate the following multiplications.

- 1 $7 \times 3 = 21$
- 2 $8 \times 4 = 32$
- 3 $7 \times 7 = 49$
- 4 $8 \times 1 = 8$
- 5 $7 \times 5 = 35$
- 6 $8 \times 5 = 40$
- 7 $7 \times 2 = 14$
- 8 $8 \times 7 = 56$
- 9 $7 \times 1 = 7$
- 10 $8 \times 2 = 16$
- 11 $7 \times 6 = 42$
- 12 $8 \times 6 = 48$
- 13 $7 \times 8 = 56$
- 14 $8 \times 3 = 24$
- 15 $7 \times 4 = 28$
- 16 $8 \times 9 = 72$
- 17 $7 \times 9 = 63$
- 18 $8 \times 8 = 64$

You can do 1, 3, 5... Let's say them smoothly without looking at the answer.

11 - 13 Multiplication-2
Multiplication Facts of 4 and 7

1 The following table shows the multiplication facts of 4 and 7. Write the numbers in the .

×	1	2	3	4	5	6	7	8	9
4	4	8	12	16	20	24	28	32	36
7	7	14	21	28	35	42	49	56	63

Example Calculate the following multiplications.

1 $4 \times 3 = 12$ 2 $7 \times 4 = 28$

2 Calculate the following multiplications.

- You can do 1, 3, 5 ... Hide the answers and practice them repeatedly.
- | | |
|----------------------|----------------------|
| 1 $4 \times 5 = 20$ | 2 $7 \times 4 = 28$ |
| 3 $4 \times 8 = 32$ | 4 $7 \times 1 = 7$ |
| 5 $4 \times 3 = 12$ | 6 $7 \times 5 = 35$ |
| 7 $4 \times 2 = 8$ | 8 $7 \times 7 = 49$ |
| 9 $4 \times 6 = 24$ | 10 $7 \times 2 = 14$ |
| 11 $4 \times 1 = 4$ | 12 $7 \times 6 = 42$ |
| 13 $4 \times 7 = 28$ | 14 $7 \times 3 = 21$ |
| 15 $4 \times 9 = 36$ | 16 $7 \times 9 = 63$ |
| 17 $4 \times 4 = 16$ | 18 $7 \times 8 = 56$ |

11 - 14 Multiplication-2
Multiplication Problems

Example There are 6 donuts in one box. There are 5 boxes. How many donuts are there altogether?

Math Sentence $6 \times 5 = 30$ Answer donuts

Read the following questions. Write the math sentences and find the answers.

- 1 There are 8 donuts in one box. There are 6 boxes. How many donuts are there altogether?
Math Sentence $8 \times 6 = 48$ Answer donuts
- 2 Six children are sitting on each bench. There are 7 benches. How many children are there altogether?
Math Sentence $6 \times 7 = 42$ Answer children
- 3 Each minibus can hold 9 people. There are 4 minibuses. How many people can be held altogether?
Math Sentence $9 \times 4 = 36$ Answer people
- 4 There are 7 children. I am going to give 3 pieces of candy to each child. How many pieces of candy do I need?
Math Sentence $3 \times 7 = 21$ Answer pieces of candy

11 - 15 Multiplication-2
Times as Much and Multiplication

Example Answer the following problems.



- 1 Colour in the tape so that it is 3 times as long as (A).
2 The length of tape (A) is 2 cm. How many cm is the tape that you coloured?

Math Sentence $2 \times 3 = 6$ Answer cm

1 Answer the following problems.



- 1 Colour in the tape so that it is 5 times as long as (B).
2 The length of tape (B) is 4 cm. How many cm is the tape that you coloured?

Math Sentence $4 \times 5 = 20$ Answer cm

2 A toy train is 4 cm long.



- 1 How many cm are 2 trains together?
Math Sentence $4 \times 2 = 8$ Answer cm

- 2 How many cm are 3 trains together?
Math Sentence $4 \times 3 = 12$ Answer cm

11 - 16 Multiplication-2
The Multiplication Table (1)

Instruction

Multiplication Math Sentence:

Number of objects in each group \times Number of groups = Total number of objects

Write the numbers in the following multiplication table.

You can do the Facts of 1, Facts of 2, Facts of 3...
For example $1 \times 1 = 1, 1 \times 2 = 2, 1 \times 3 = 3, \dots$

		Multipliers								
		1	2	3	4	5	6	7	8	9
Multiplicands	Facts of 1	1	2	3	4	5	6	7	8	9
	Facts of 2	2	4	6	8	10	12	14	16	18
	Facts of 3	3	6	9	12	15	18	21	24	27
	Facts of 4	4	8	12	16	20	24	28	32	36
	Facts of 5	5	10	15	20	25	30	35	40	45
	Facts of 6	6	12	18	24	30	36	42	48	54
	Facts of 7	7	14	21	28	35	42	49	56	63
	Facts of 8	8	16	24	32	40	48	56	64	72
	Facts of 9	9	18	27	36	45	54	63	72	81

11 - 17 Multiplication-2
The Multiplication Table (2)

Example Find the multiplication sentences that match 18.

Arrange 18 dots in various ways.

$2 \times 9 = 18$ $6 \times 3 = 18$
 $3 \times 6 = 18$ $9 \times 2 = 18$

1 Find the multiplication sentences that match 12.

There can be these arrangements. What else are there?

$2 \times 6 = 12$
 $6 \times 2 = 12$
 $3 \times 4 = 12$
 $4 \times 3 = 12$

2 Find the multiplication sentences that match 24.

There is this arrangement. What else are there?

$3 \times 8 = 24$
 $8 \times 3 = 24$
 $4 \times 6 = 24$
 $6 \times 4 = 24$

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11 - 18 Multiplication-2
Making Multiplication Problems

Example Look at the picture and make a multiplication problem. Then write a math sentence and find the answer.

Multiplication problem: There are 5 donuts on one plate. There are 3 plates. How many donuts are there altogether?

Math Sentence: $5 \times 3 = 15$ Answer: 15 donuts

Look at the following pictures and make multiplication problems. Then write math sentences and find the answers.

1

Multiplication problem: There are 7 pens in one set. There are 6 sets. How many pens are there altogether?

Math Sentence: $7 \times 6 = 42$ Answer: 42 pens

2

Multiplication problem: There are 9 chocolates in one box. There are 4 boxes. How many chocolates are there altogether?

Math Sentence: $9 \times 4 = 36$ Answer: 36 chocolates

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11 - 19 Multiplication-2
Problems

Example How many chocolates are in the box altogether? Think about different ways to find the answer.

Method 1
2 groups of 2 make 2×2 .
3 groups of 6 make 6×3 .
 $2 \times 2 = 4$ and $6 \times 3 = 18$.
 $4 + 18 = 22$. **22 chocolates**

Method 2
5 groups of 2 make 2×5 .
3 groups of 4 make 4×3 .
 $2 \times 5 = 10$ and $4 \times 3 = 12$.
 $10 + 12 = 22$. **22 chocolates**

Method 3
5 groups of 6 make 6×5 .
2 groups of 4 make 4×2 .
 $6 \times 5 = 30$ and $4 \times 2 = 8$.
 $30 - 8 = 22$. **22 chocolates**

1 How many sweets are in the box altogether? Think about different ways to find the answer.

Method 1:
3 groups of 4 make 4×3 .
3 groups of 6 make 6×3 .
 $4 \times 3 = 12$ and $6 \times 3 = 18$.
 $12 + 18 = 30$. **30 sweets**

Method 2:
6 groups of 4 make 4×6 .
3 groups of 2 make 2×3 .
 $4 \times 6 = 24$ and $2 \times 3 = 6$.
 $24 + 6 = 30$. **30 sweets**

Method 3:
6 groups of 6 make 6×6 .
3 groups of 2 make 2×3 .
 $6 \times 6 = 36$ and $2 \times 3 = 6$.
 $36 - 6 = 30$. **30 sweets**

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2 How many stars (★) are there altogether? Think about different ways to find the answer.

Method 1:
5 groups of 2 make 2×5 .
3 groups of 4 make 4×3 .
 $2 \times 5 = 10$ and $4 \times 3 = 12$.
 $10 + 12 = 22$. **22 stars**

Method 2:
8 groups of 2 make 2×8 .
3 groups of 2 make 2×3 .
 $2 \times 8 = 16$ and $2 \times 3 = 6$.
 $16 + 6 = 22$. **22 stars**

Method 3:
8 groups of 4 make 4×8 .
5 groups of 2 make 2×5 .
 $4 \times 8 = 32$ and $2 \times 5 = 10$.
 $32 - 10 = 22$. **22 stars**

3 How many star marks (★) are there altogether? Think about different ways to find the answer.

Method 1:
8 groups of 2 make 2×8 .
 $2 \times 8 = 16$. **16 stars**

Method 2:
4 groups of 4 make 4×4 .
 $4 \times 4 = 16$. **16 stars**

Method 3:
4 groups of 4 make 4×4 .
 $4 \times 4 = 16$. **16 stars**

There are also other ways too.

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11 - 20 Multiplication-2 **Review**

1 The following is the multiplication table. Write the numbers in the blanks.

×	1	2	3	4	5	6	7	8	9
1	1	2	3	4	5	6	7	8	9
2	2	4	6	8	10	12	14	16	18
3	3	6	9	12	15	18	21	24	27
4	4	8	12	16	20	24	28	32	36
5	5	10	15	20	25	30	35	40	45
6	6	12	18	24	30	36	42	48	54
7	7	14	21	28	35	42	49	56	63
8	8	16	24	32	40	48	56	64	72
9	9	18	27	36	45	54	63	72	81

3 Calculate the following multiplications.

- 1 $6 \times 3 = 18$ 2 $7 \times 2 = 14$ 3 $9 \times 2 = 18$
 4 $8 \times 1 = 8$ 5 $9 \times 4 = 36$ 6 $9 \times 7 = 63$
 7 $8 \times 3 = 24$ 8 $6 \times 5 = 30$ 9 $9 \times 8 = 72$
 10 $7 \times 4 = 28$ 11 $8 \times 5 = 40$ 12 $7 \times 7 = 49$
 13 $6 \times 4 = 24$ 14 $7 \times 9 = 63$ 15 $8 \times 6 = 48$

2 Read the following questions. Write the math sentences and find the answers.

1 There are 7 peanuts in each bag. There are 6 bags. How many peanuts are there altogether?
 Math Sentence $7 \times 6 = 42$ Answer **42** peanuts

2 There are 6 pens in one set. There are 4 sets. How many pens are there altogether?
 Math Sentence $6 \times 4 = 24$ Answer **24** pens

3 Answer the following questions.



1 Colour in the tape so that it is 3 times as long as (A).

2 The length of tape (A) is 3 cm. How many cm is the tape that you coloured?
 Math Sentence $3 \times 3 = 9$ Answer **9** cm

4 How many sweets are in the box altogether? Think about different ways to find the answer.

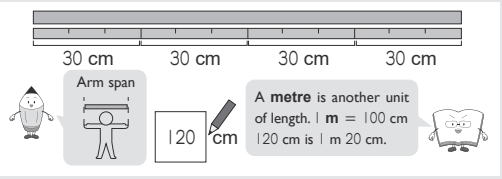
Method 1:
 3 groups of 3 make 3×3 .
 2 groups of 6 make 6×2 .
 $3 \times 3 = 9$ and $6 \times 2 = 12$.
 $9 + 12 = 21$. **21 sweets**

Method 2:
 5 groups of 3 make 3×5 .
 2 groups of 3 make 3×2 .
 $3 \times 5 = 15$ and $3 \times 2 = 6$.
 $15 + 6 = 21$. **21 sweets**

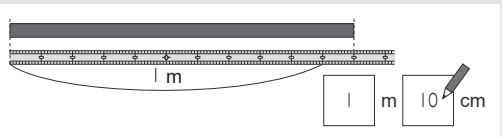
Method 3:
 5 groups of 6 make 6×5 .
 3 groups of 3 make 3×3 .
 $6 \times 5 = 30$ and $3 \times 3 = 9$.
 $30 - 9 = 21$. **21 sweets**

12 - 1 Length of Long Objects **Units of Length**

Instruction A girl's arm span is exactly 4 ruler lengths long using a 30 cm ruler. How long is her arm span?



Example How long is the piece of tape in meters and centimeters?



How long is the piece of tape in meters and centimeters?

- 1 **1 m 5 cm**
- 2 **1 m 15 cm**

12 - 2 Length of Long Objects **Addition of Lengths**

Example 1 Fill in the blanks.

- 1 $1 \text{ m} = 100 \text{ cm}$ 2 $150 \text{ cm} = 1 \text{ m } 50 \text{ cm}$

Example 2 Calculate the following lengths in meters and centimeters.

- 1 $2 \text{ m } 50 \text{ cm} + 1 \text{ m } 10 \text{ cm} = 3 \text{ m } 60 \text{ cm}$
 $1 \text{ m} = 100 \text{ cm}$ Calculate the meters and the centimeters separately.
- 2 $60 \text{ cm} + 70 \text{ cm} = 1 \text{ m } 30 \text{ cm}$

1 Fill in the blanks.

- 1 $400 \text{ cm} = 4 \text{ m}$ 2 $7 \text{ m} = 700 \text{ cm}$
 3 $350 \text{ cm} = 3 \text{ m } 50 \text{ cm}$
 4 $105 \text{ cm} = 1 \text{ m } 5 \text{ cm}$

2 Calculate the following lengths in meters and centimeters.

- 1 $3 \text{ m} + 2 \text{ m} = 5 \text{ m}$
 2 $2 \text{ m } 30 \text{ cm} + 1 \text{ m} = 3 \text{ m } 30 \text{ cm}$
 3 $4 \text{ m } 10 \text{ cm} + 50 \text{ cm} = 4 \text{ m } 60 \text{ cm}$
 4 $1 \text{ m } 20 \text{ cm} + 2 \text{ m } 50 \text{ cm} = 3 \text{ m } 70 \text{ cm}$
 5 $1 \text{ m } 30 \text{ cm} + 90 \text{ cm} = 2 \text{ m } 20 \text{ cm}$

12-3 Length of Long Objects
Subtraction of Lengths

Example Calculate the following lengths in meters and centimeters.

- 1 $3\text{ m} - 1\text{ m} = 2\text{ m}$
- 2 $4\text{ m } 20\text{ cm} - 1\text{ m } 10\text{ cm} = 3\text{ m } 10\text{ cm}$
- 3 $2\text{ m} - 50\text{ cm} = 1\text{ m } 50\text{ cm}$

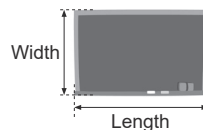
Calculate the following lengths in meters and centimeters.

- 1 $5\text{ m} - 2\text{ m} = 3\text{ m}$
- 2 $3\text{ m } 30\text{ cm} - 1\text{ m} = 2\text{ m } 30\text{ cm}$
- 3 $4\text{ m } 70\text{ cm} - 20\text{ cm} = 4\text{ m } 50\text{ cm}$
- 4 $1\text{ m } 20\text{ cm} - 15\text{ cm} = 1\text{ m } 5\text{ cm}$
- 5 $5\text{ m } 50\text{ cm} - 2\text{ m } 10\text{ cm} = 3\text{ m } 40\text{ cm}$
- 6 $2\text{ m } 45\text{ cm} - 1\text{ m } 15\text{ cm} = 1\text{ m } 30\text{ cm}$
- 7 $2\text{ m } 40\text{ cm} - 1\text{ m } 25\text{ cm} = 1\text{ m } 15\text{ cm}$
- 8 $10\text{ m } 50\text{ cm} - 2\text{ m } 10\text{ cm} = 8\text{ m } 40\text{ cm}$
- 9 $5\text{ m } 20\text{ cm} - 2\text{ m } 50\text{ cm} = 2\text{ m } 70\text{ cm}$
- 10 $7\text{ m } 30\text{ cm} - 1\text{ m } 35\text{ cm} = 5\text{ m } 95\text{ cm}$

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12-4 Length of Long Objects
Calculation of Lengths (1)

Example Calculate the dimensions of a blackboard.



- 1 The length of the blackboard is 20 cm longer than 3 m.

$3\text{ m } 20\text{ cm}$

- 2 The width of the blackboard is 6 cm longer than 2 m.

$2\text{ m } 6\text{ cm}$

Calculate the dimensions of a container.

- 1 The length of the container is 10 cm longer than 2 m.

$2\text{ m } 10\text{ cm}$

- 2 The width of the container is 15 cm longer than 1 m.

$1\text{ m } 15\text{ cm}$

- 3 The height of the container is 3 cm longer than 1 m.

$1\text{ m } 3\text{ cm}$

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12-5 Length of Long Objects
Calculation of Lengths (2)

Example Calculate the dimensions of a bus.



- 1 The length of the bus is 20 cm shorter than 7 m.

$6\text{ m } 80\text{ cm}$

- 2 The width of the bus is 25 cm shorter than 2 m.

$1\text{ m } 75\text{ cm}$

- 3 The height of the bus is 6 cm shorter than 3 m.

$2\text{ m } 94\text{ cm}$

Calculate the dimensions of a desk.

- 1 The length of the desk is 10 cm shorter than 3 m.

$2\text{ m } 90\text{ cm}$

- 2 The width of the desk is 15 cm shorter than 2 m.

$1\text{ m } 85\text{ cm}$

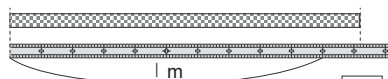
- 3 The height of the desk is 3 cm shorter than 1 m.

97 cm

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12-6 Length of Long Objects
Review

- 1 How long is the piece of tape in meters and centimeters?



$1\text{ m } 12\text{ cm}$

- 2 Fill in the blanks.

1 $200\text{ cm} = 2\text{ m}$ 2 $6\text{ m} = 600\text{ cm}$

3 $450\text{ cm} = 4\text{ m } 50\text{ cm}$

4 $107\text{ cm} = 1\text{ m } 7\text{ cm}$

- 3 Calculate the following lengths in meters and centimeters.

1 $1\text{ m} + 3\text{ m} = 4\text{ m}$

2 $6\text{ m } 10\text{ cm} + 7\text{ m} = 13\text{ m } 10\text{ cm}$

3 $4\text{ m } 80\text{ cm} + 1\text{ m } 50\text{ cm} = 6\text{ m } 30\text{ cm}$

- 4 Calculate the following lengths in meters and centimeters.

1 $7\text{ m} - 3\text{ m} = 4\text{ m}$

2 $2\text{ m } 30\text{ cm} - 20\text{ cm} = 2\text{ m } 10\text{ cm}$

3 $4\text{ m } 60\text{ cm} - 1\text{ m } 20\text{ cm} = 3\text{ m } 40\text{ cm}$

4 $2\text{ m } 20\text{ cm} - 40\text{ cm} = 1\text{ m } 80\text{ cm}$

5 $3\text{ m } 20\text{ cm} - 85\text{ cm} = 2\text{ m } 35\text{ cm}$

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13-1 Shapes of Boxes Let's Make Boxes (1)

Instruction Characteristics of boxes.

Type A	Type B	Type C
Formed only by squares	Formed by squares and rectangles	Formed only by rectangles

Labels: side, face, vertex

- Flat surfaces of a box are called face.
- The line between two faces is called side.
- The point where three sides meet is called vertex.

Example 1 Classify the following boxes into the three types. Which types are these?

(a) Type A is (b)

(b) Type B is (c)

(c) Type C is (a)

1 Classify the following boxes into the three types.

(a) (b) (c)

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(d) (e) (f)

Type A are (a) and (e) Type B are (c) and (d)

Type C are (b) and (f)

Example 2 Investigate the following box.

1 Count the number of sides, faces and vertices.

	Vertexes	Sides	Faces
	8	12	6

2 Write down the shapes of faces and the lengths of sides.

	Faces	Sides
	Squares with the same size	All the lengths are the same

2 Investigate the following box.

1 Count the number of sides, faces and vertices.

	Vertexes	Sides	Faces
	8	12	6

You can find a box and count the vertexes, sides, and faces.

2 Write down the shapes of faces and the lengths of sides.

	Faces	Sides
	Opposite faces are the same shape and size.	3 kinds of lengths are described in 3 kinds of color

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13-2 Shapes of Boxes Let's Make Boxes (2)

Instruction Summary of characteristics of boxes.

1 The number of sides, faces and vertices.

	Vertexes	Sides	Faces
	8	12	6

2 Write down the shapes of faces and the lengths of sides.

	Faces	Sides
	Squares with the same size	All the lengths are the same
	Opposite faces are the same shape and size.	3 kinds of lengths are described in 3 kinds of color

Example Find the length of the side marked in red.

1 2 cm. 5 cm.

1 Find the length of the side marked in red.

1 3 cm. 4 cm.

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3 5 cm. 4 cm.

4 4 cm.

5 4 cm. 3 cm.

6 3 cm. 3 cm.

Example 2 When you tape together to make a box, which one will you make, (a), (b), or (c)?

(a) (b) (c)

2 When you tape together to make a box, which one will you make, (a), (b), or (c)?

1 (a) (b) (c)

2 (a) (b) (c)

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13-3 Shapes of Boxes **Review**

1 Investigate the following box.

1 Count the number of sides, faces and vertices.

	Vertexes	Sides	Faces
	8	12	6

2 Write down the shapes of faces and the lengths of sides.

	Faces	Sides
	Opposite faces are the same shape and size.	3 kinds of lengths are described in 3 kinds of color

2 Find the length of the side marked in red.

1 1 cm. 3 cm.

3 2 cm. 5 cm.

5 4 cm. 1 cm.

7 3 cm.

8 7 cm.

2 When you tape together to make a box, which one will you make, (a), (b), or (c)?

1 (a) (b) (c)

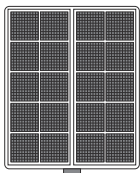
2 (a) (b) (c)

3 (a) (b) (c)

4 (a) (b) (c)

14-1 Numbers Greater Than 1000 **How to Express Numbers**

Instruction There is the "One Thousands Place" next to the "Hundreds Place" that was already learnt. In this "One Thousands Place," there are groups of 1000 blocks.



Two groups of a thousand is called two thousand.

If you put two thousand and three hundred forty-five together, we have the number "two thousand, three hundred forty-five."

One Thousands Place	Hundreds Place	Tens Place	Ones Place
2	3	4	5

In many countries, the comma (,) or space are added every three digits to make it easier to read, like 2,345 or 2 345.

Example What amount is shown in the following problems? Write the numbers and read them.

There are 4 groups of a thousand. It is called four thousand. There are 3 groups of a hundred (three hundred), 2 groups of a ten (twenty) and 1 (one). Altogether it is called four thousand three hundred twenty-one.

One Thousands Place	Hundreds Place	Tens Place	Ones Place
4	3	2	1

Four thousand three hundred twenty-one

What amounts are shown in the followings? Write the numbers and read them.

1

One Thousands Place	Hundreds Place	Tens Place	Ones Place
4	3	2	5

Four thousand three hundred twenty-five

2

One Thousands Place	Hundreds Place	Tens Place	Ones Place
5	3	3	5

Five thousand three hundred thirty-five

3

One Thousands Place	Hundreds Place	Tens Place	Ones Place
6	4	2	7

Six thousand four hundred twenty-seven

4

One Thousands Place	Hundreds Place	Tens Place	Ones Place
8	1	3	3

Eight thousand one hundred thirty-three

5

One Thousands Place	Hundreds Place	Tens Place	Ones Place
1	1	9	2

One thousand one hundred ninety-two

6

One Thousands Place	Hundreds Place	Tens Place	Ones Place
2	3	0	1

Two thousand three hundred one

7

One Thousands Place	Hundreds Place	Tens Place	Ones Place
5	4	0	0

Five thousand four hundred

There is nothing in some places. In this case, you can write "0" and do not read these places.

14-2 Numbers Greater Than 1000
Structure of Numbers (1)

Example Write the number in the .

① 5763 is the number made of thousands, hundreds, tens, and ones.

One Thousands Place	Hundreds Place	Tens Place	Ones Place
5	7	6	3

② is the number made of 3 thousands, 2 hundreds, 5 tens, and 4 ones.

One Thousands Place	Hundreds Place	Tens Place	Ones Place
3	2	5	4

Write the numbers in the .

① 5784 is the number made of thousands, hundreds, tens, and ones.

One Thousands Place	Hundreds Place	Tens Place	Ones Place
5	7	8	4

② 6532 is the number made of thousands, hundreds, tens, and ones.

③ 8307 is the number made of thousands, hundreds, and ones.

④ 7605 is the number made of thousands, hundreds, and ones.

⑤ 6082 is the number made of thousands, tens, and ones.

⑥ 4003 is the number made of thousands and ones.

⑦ is the number made of 3 thousands, 4 hundreds, 7 tens, and 1 ones.

One Thousands Place	Hundreds Place	Tens Place	Ones Place
3	4	7	1

⑧ is the number made of 4 thousands, 2 hundreds, 8 tens, and 9 ones.

⑨ is the number made of 5 thousands, 3 hundreds, 1 tens, and 6 ones.

⑩ is the number made of 7 thousands, 6 hundreds, and 3 ones.

⑪ is the number made of 6 thousands, 3 tens, and 5 ones.

⑫ is the number made of 8 thousands and 5 tens.

⑬ is the number made of 2 thousands and 6 ones.

14-3 Numbers Greater Than 1000
Structure of Numbers (2)

Example Write the numbers in the .

① $7269 = 7000 + 200 + 60 + 9$
7269 is the number made of 7000, 200, 60 and 9.

② $4901 = 4000 + 900 + 1$
4901 is the number made of 4000, 900, and 1.

Write the numbers in the .

① $4612 = 4000 + 600 + 10 + 2$

② $5749 = 5000 + 700 + 40 + 9$

③ $7836 = 7000 + 800 + 30 + 6$

④ $2674 = 2000 + 600 + 70 + 4$

⑤ $6420 = 6000 + 400 + 20$

⑥ $8703 = 8000 + 700 + 3$

⑦ $5904 = 5000 + 900 + 4$

⑧ $1500 = 1000 + 500$

⑨ $2073 = 2000 + 70 + 3$

⑩ $4005 = 4000 + 5$

14-4 Numbers Greater Than 1000
Comparing Numbers

Example Compare the following two numbers and write the appropriate sign (< or >) in the .

① $6000 > 5990$

② $8397 < 8402$

First compare the numbers in the one thousands place.
If the numbers are the same, compare the numbers in the hundreds place.

Compare the following two numbers and write the appropriate sign (< or >) in the .

① $6235 > 5982$

② $3583 < 4123$

③ $7100 > 6900$

④ $5899 < 6211$

⑤ $4584 < 6291$

⑥ $2353 > 1985$

⑦ $1486 < 1613$

⑧ $7569 > 7280$

⑨ $3529 > 3129$

⑩ $4673 > 4598$

⑪ $5769 < 5799$

⑫ $8153 < 8161$

⑬ $2057 < 2058$

⑭ $3937 < 3939$

14-5 Numbers Greater Than 1000
Making Numbers

Example There are four number cards below. Make the following numbers by using these four cards.

2 4 7 9

1 The largest number 9742 .
2 The second largest number 9472 .

The largest number card is 9. So, it will be 9****.

There are four number cards below. Make the following numbers by using these three cards.

1 3 5 7

- The largest number 7531
 - The second largest number 7351
 - The smallest number 1357
 - The second smallest number 1537
 - Numbers that are larger than 7500.
 $7531, 7513$
 - Numbers that are smaller than 1500.
 $1357, 1375$
- There are two numbers altogether.
- There are two numbers altogether.

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14-6 Numbers Greater Than 1000
Number Line

Example Write the numbers in the \square .

1 The smallest tick marks show units of 100.

2

Write the numbers in the \square .

-
-
-
-
-

What is the smallest tick mark shown above?

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14-7 Numbers Greater Than 1000
Addition with Hundreds

Example 1 Calculate the following addition problem.

$400 + 900 = 1300$

Think about how many hundreds there are. 400 has 4 hundreds and 900 has 9 hundreds. So add 4 and 9. The answer is 13. It means 13 hundreds. 13 hundreds is 1 thousand and 3 hundreds. Therefore the answer is 1300.

- Calculate the following addition problems.
 - $500 + 900 = 1400$
 - $900 + 400 = 1300$
 - $700 + 800 = 1500$
 - $400 + 800 = 1200$
 - $400 + 700 = 1100$
 - $800 + 900 = 1700$
 - $500 + 600 = 1100$
 - $900 + 100 = 1000$
 - $500 + 700 = 1200$
 - $200 + 800 = 1000$

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Example 2 Calculate the following addition problem.

$2000 + 500 = 2500$

Think about how many hundreds there are. 2000 has 20 hundreds and 500 has 5 hundreds. So add 20 and 5. The answer is 25. It means 25 hundreds. 25 hundreds is 2 thousands and 5 hundreds. Therefore the answer is 2500.

- Calculate the following addition problems.
 - $2000 + 900 = 2900$
 - $5000 + 400 = 5400$
 - $7000 + 800 = 7800$
 - $9000 + 100 = 9100$
 - $6000 + 700 = 6700$
 - $1000 + 200 = 1200$
 - $4000 + 600 = 4600$
 - $3000 + 500 = 3500$
 - $8000 + 300 = 8300$
 - $7000 + 500 = 7500$

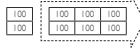
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14-8 Numbers Greater Than 1000
Subtraction with Hundreds

Example 1 Calculate the following subtraction problem.

$$800 - 600 = 200$$

Think about how many hundreds there are.
800 has 8 hundreds and 600 has 6 hundreds.
So subtract 6 from 8. The answer is 2. It means 2 hundreds.
Therefore the answer is 200.



1 Calculate the following subtraction problems.

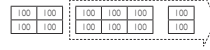
- | | |
|----------------------|----------------------|
| 1 $800 - 700 = 100$ | 2 $700 - 300 = 400$ |
| 3 $600 - 400 = 200$ | 4 $400 - 100 = 300$ |
| 5 $500 - 400 = 100$ | 6 $800 - 600 = 200$ |
| 7 $300 - 100 = 200$ | 8 $900 - 500 = 400$ |
| 9 $700 - 200 = 500$ | 10 $700 - 100 = 600$ |
| 11 $900 - 800 = 100$ | 12 $600 - 200 = 400$ |

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Example 2 Calculate the following subtraction problem.

$$1200 - 800 = 400$$

Think about how many hundreds there are.
1200 has 12 hundreds and 800 has 8 hundreds.
So subtract 8 from 12. The answer is 4. It means 4 hundreds.
Therefore the answer is 400.



2 Calculate the following subtraction problems.

- | | |
|----------------------|----------------------|
| 1 $1200 - 900 = 300$ | 2 $1300 - 500 = 800$ |
| 3 $1600 - 700 = 900$ | 4 $1500 - 800 = 700$ |
| 5 $1400 - 700 = 700$ | 6 $1100 - 300 = 800$ |

Example 2 Calculate the following subtraction problem.

$$10000 - 3000 = 7000$$

10000 is 10000

Think about how many thousands there are.
10000 has 10 thousands and 3000 has 3 thousands.
So subtract 3 from 10. The answer is 7. It means 7 thousands.
Therefore the answer is 7000.

3 Calculate the following subtraction problems.

- | | |
|-------------------------|-------------------------|
| 1 $10000 - 6000 = 4000$ | 2 $10000 - 8000 = 2000$ |
|-------------------------|-------------------------|

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14-9 Numbers Greater Than 1000
Review

1 Write the numbers in the .

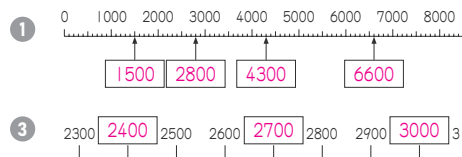
- 7532 is the number made of thousands, hundreds, tens, and ones.
- 2496 is the number made of thousands, hundreds, tens, and ones.
- 7505 is the number made of thousands, hundreds, and ones.
- is the number made of 2 thousands, 8 hundreds, 3 tens, and 5 ones.
- is the number made of 7 thousands, 4 hundreds, 2 tens, and 7 ones.
- is the number made of 2 thousands, 3 hundreds, and 4 ones.
- $6194 = \text{}000 + \text{}100 + \text{}90 + \text{}4$
- $1721 = \text{}1000 + \text{}700 + \text{}20 + \text{}1$
- $5432 = \text{}5000 + \text{}400 + \text{}30 + \text{}2$

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2 Compare the following two numbers and write the appropriate sign ($<$ or $>$) in the .

- | | |
|-----------------|-----------------|
| 1 $9876 > 8952$ | 2 $2345 < 3456$ |
| 3 $5632 > 5599$ | 4 $7389 < 7411$ |
| 5 $3610 < 3620$ | 6 $6285 > 6283$ |

3 Write the numbers in the .



4 Calculate the following addition problems.

- | | |
|-------------------------|--------------------------|
| 1 $300 + 900 = 1200$ | 2 $700 + 400 = 1100$ |
| 3 $7000 + 800 = 7800$ | 4 $4000 + 500 = 4500$ |
| 5 $600 - 200 = 400$ | 6 $800 - 600 = 200$ |
| 7 $1400 - 600 = 800$ | 8 $1300 - 800 = 500$ |
| 9 $10000 - 7000 = 3000$ | 10 $10000 - 6000 = 4000$ |

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15-1 Let's Think about Using Diagrams
Using Diagrams (1)

Example I had some oranges. My friend gave me 13 oranges. Now I have 48 oranges altogether. How many oranges did I have at first?

Total number of oranges (48) oranges

35 oranges (13) oranges

oranges I had at first oranges received

Look at the diagram. I received 13 oranges, so write "13" in the diagram. I have 48 oranges altogether, so write "48" in the diagram. Then think about how you can find the number of oranges I had at first. $48 - 13 = 35$.

Math Sentence $48 - 13 = 35$ Answer 35 oranges

- 1** My mother had some tomatoes. She bought 12 tomatoes at the shop today. Now she has 37 tomatoes. How many tomatoes did she have at first?

Total number of tomatoes (37) tomatoes

25 tomatoes (12) tomatoes

Tomatoes she had at first Tomatoes she bought

Math Sentence $37 - 12 = 25$ Answer 25 tomatoes

- 2** We had several notebooks at home. My brothers bought 18 notebooks at the shop. Now we have 27 notebooks. How many notebooks did we have at first?

Total number of notebooks (27) notebooks

9 notebooks (18) notebooks

Notebooks we had at first Notebooks my brothers bought

Math Sentence $27 - 18 = 9$

Answer 9 notebooks

- 3** There are 60 sheets of red and blue paper altogether. There are 45 sheets of red paper. How many sheets of blue paper are there?

Total number of sheets of paper (60) sheets

(45) sheets of red paper 15 sheets of blue

Red paper Blue paper

Math Sentence $60 - 45 = 15$

Answer 15 sheets of blue paper

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15-2 Let's Think about Using Diagrams
Using Diagrams (2)

Example There are some chocolates. My brothers ate 17 chocolates and there are 15 chocolates left. How many chocolates were there at first?

Total number of chocolates 32 chocolates

(17) chocolates (15) chocolates

Chocolates that my brothers ate Chocolates that is left

Look at the diagram. The number of chocolates that my brothers ate is 17. There are 15 chocolates left. So the total number of chocolates can be found using this math sentence. $17 + 15 = 32$. The answer is 32 chocolates.

Math Sentence $17 + 15 = 32$ Answer 32 chocolates

- 1** We have some cans of juice. We passed out 27 cans to our friends. We have 13 cans left. How many cans of juice did we have at first?

Total number of cans of juice 40 cans

(27) cans of juice (13) cans of juice

Cans of juice we passed out to our friends Cans of juice that are left

Math Sentence $27 + 13 = 40$ Answer 40 cans of juice

- 2** There were several cars parked in the parking area. Twelve cars drove away. There are 29 cars left. How many cars were there in the parking area at first?

Total number of cars that were parked 41 cars

(12) cars (29) cars

Cars that drove away Cars that are left in the parking area

Math Sentence $12 + 29 = 41$

Answer 41 cars

- 3** I had several stickers at home. I gave 35 stickers to my classmates. I have only 16 stickers left. How many stickers did I have at first? Make your own diagram and find the answer.

Total number of stickers 51 stickers

(35) stickers (16) stickers

Stickers that I gave to my classmates Stickers that are left

Math Sentence $35 + 16 = 51$

Answer 51 stickers

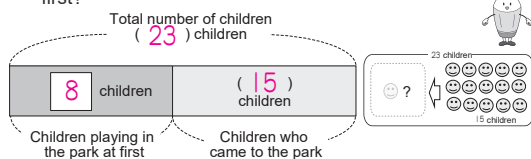
This is a challenging task. Can you solve this?

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15 - 3 Let's Think about Using Diagrams **Review**

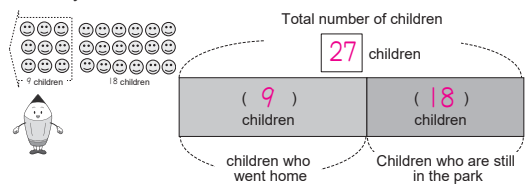
1 There were several children playing in the park. Now 15 children came to the park. There are now 23 children altogether. How many children were there in the park at first?



Math Sentence $23 - 15 = 8$

Answer **8** children

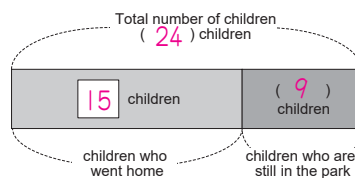
2 There were several children playing in the park. Nine children went home. There are 18 children left. How many children were there at first?



Math Sentence $9 + 18 = 27$

Answer **27** children

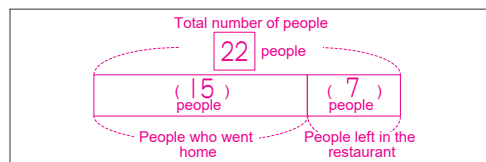
3 There were 24 children playing in the park. Several children went home. There are only 9 children left. How many children went home?



Math Sentence $24 - 9 = 15$

Answer **15** children

4 There were several people in the restaurant. Fifteen people went home. There are only 7 people left in the restaurant. How many people were in the restaurant at first? Make your own diagram. Make a math sentence and find the answer.



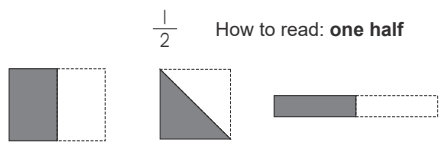
Math Sentence $15 + 7 = 22$

Answer **22** people

This is also another challenging task. Can you solve this?

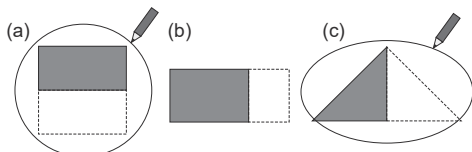
16 - 1 Describing the Size of Divided Parts **One Half**

Instruction When something is divided into two equal parts, the size of one of the parts is called **one half**. It is written as the following:



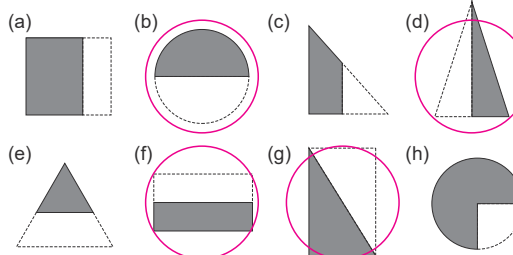
This kind of number is called a **fraction**.

Example Circle the following pictures that show an object divided into $\frac{1}{2}$ parts.

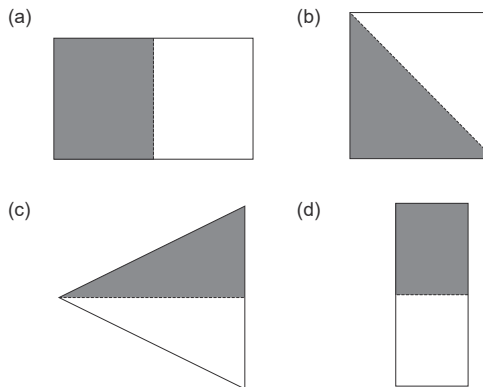


We should think about whether it is divided into two equal parts. The word of "equal" is very important.

1 Circle the following pictures that show an object divided into $\frac{1}{2}$ parts.

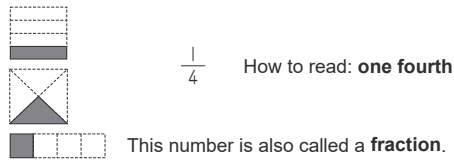


2 Colour a $\frac{1}{2}$ part of the shape in the following pictures.

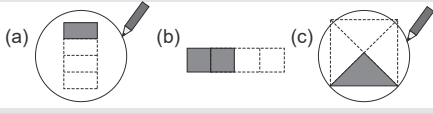


16 - 2 Describing the Size of Divided Parts
One Fourth

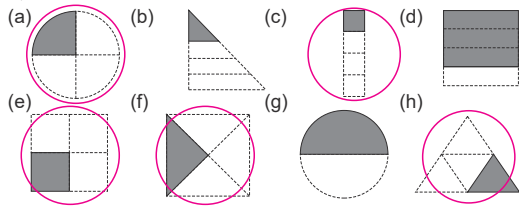
Instruction When something is divided into four equal parts, the size of one of the parts is called **one fourth**. It is written as the following:



Example Circle the following pictures that show an object divided into $\frac{1}{4}$ parts.



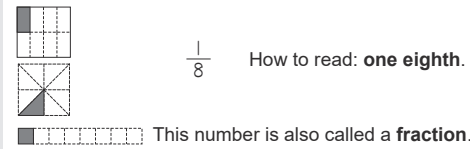
Circle the following pictures that show an object divided into $\frac{1}{4}$ parts.



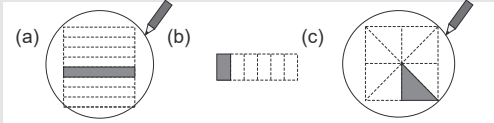
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16 - 3 Describing the Size of Divided Parts
One Eighth

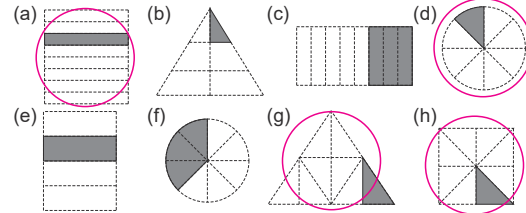
Instruction When something is divided into eight equal parts, the size of one of the parts is called **one eighth**. It is written as the following:



Example Circle the following pictures that show an object divided into $\frac{1}{8}$ parts.



Circle the following pictures that show an object divided into $\frac{1}{8}$ parts.

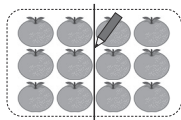


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16 - 4 Describing the Size of Divided Parts
Original Size and Fractions

Example 1 There are 12 oranges. Answer the following questions.

1 Draw a line to divide 12 oranges into two equal parts.



2 How many oranges are there in one $\frac{1}{2}$ part?

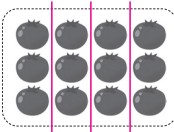
6 oranges

3 What happens if you multiply the answer of 2 by 2?

Multiplying 6 by 2 equals 12, which is the original number of oranges.

1 There are 12 tomatoes. Answer the following questions.

1 Draw lines to divide 12 tomatoes into four equal parts



2 How many tomatoes are there in one $\frac{1}{4}$ part? 3 tomatoes

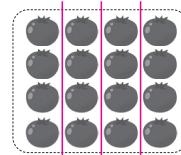
3 What happens if you multiply the answer to Problem 2 by 4?

Multiplying 3 by 4 equals 12, which is the original number of tomatoes.

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2 There are 16 tomatoes. Answer the following questions.

1 Draw lines to divide 16 tomatoes into four equal parts.



2 How many tomatoes are there in one $\frac{1}{4}$ part? 4 tomatoes

3 Why are the number of tomatoes in one $\frac{1}{4}$ part in Problem 1 and Problem 2 different?

This is because the original number of tomatoes are different. There are 12 tomatoes in Problem 1 and 16 tomatoes in problem 2.



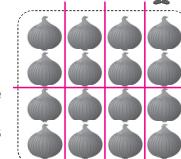
This is a very important point!

3 There are 16 onions. Answer the following questions.

Can you divide this into equal eight parts?



1 Draw lines to divide 16 onions into eight equal parts.



2 How many onions are there in one $\frac{1}{8}$ part? 2 onions


3 What happens if you multiply the answer to Problem 2 by 8?


Multiplying 2 by 8 equals 16, which is the original number of onions.


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
16 - 5 Describing the Size of Divided Parts **Review**

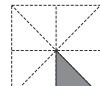
- Write the numbers in the .
 - When something is divided into two equal parts, the size of one of the parts is called one half and is written as $\frac{1}{2}$.
 - When something is divided into eight equal parts, the size of one of the parts is called one eighth and is written as $\frac{1}{8}$.
 - When something is divided into four equal parts, the size of one of the parts is called one fourth and is written as $\frac{1}{4}$.
- 2 How big is the coloured parts compared to the original shape? Choose from $\frac{1}{2}$, $\frac{1}{4}$, or $\frac{1}{8}$.


1 $\frac{1}{2}$ 

2 $\frac{1}{8}$ 

3 $\frac{1}{4}$ 

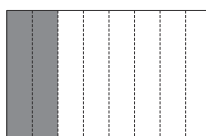
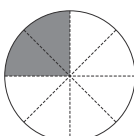
4 $\frac{1}{4}$ 

5 $\frac{1}{8}$ 

6 $\frac{1}{2}$ 

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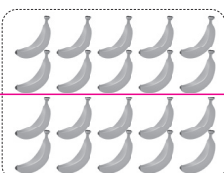
- 3 Colour a $\frac{1}{4}$ part of the shape in the following pictures.

(a)  (b) 

There are many lines. Do not be confused!
Think about dividing the shape into four equal parts. Which lines are important?

- 4 There are 20 bananas. Answer the following questions.

1 Draw a line to divide 20 bananas into two equal parts.



2 How many bananas are there in one $\frac{1}{2}$ part? bananas


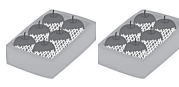


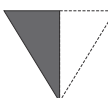
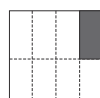
3 What happens if you multiply the answer to Problem 2 by 2?
Multiplying 10 by 2 equals 20, which is the original number of bananas.

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Number & Operation
Entire Grade-2 Review (1)

- 1 Calculate the following problems by using the algorithm.
- 1 $38 + 21 = 59$ 2 $18 + 27 = 45$ 3 $7 + 96 = 103$ 4 $257 + 23 = 280$
- 5 $69 - 18 = 51$ 6 $92 - 76 = 16$ 7 $51 - 4 = 47$ 8 $125 - 96 = 29$
- 2 Calculate the following problems.
- 1 $400 + 200 = 600$ 2 $800 - 300 = 500$ 3 $1000 - 300 = 700$
- 3 Compare the following two numbers and write the appropriate sign ($<$ or $>$) in the .
- 1 $427 < 582$ 2 $762 > 726$ 3 $8182 > 8131$
- 4 There are 18 boy students and 25 girl students in my class.
- 1 How many students are there in my class?
Math Sentence $18 + 25 = 43$ Answer students
- 2 Today 4 students were absent. How many students are there today?
Math Sentence $43 - 4 = 39$ Answer students

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- 5 Calculate the following multiplication problems.
- 1 $6 \times 3 = 18$ 2 $9 \times 6 = 54$ 3 $2 \times 5 = 10$
- 4 $4 \times 7 = 28$ 5 $1 \times 6 = 6$ 6 $3 \times 9 = 27$
- 6 There are 5 boxes, each of which has 6 donuts. How many donuts are there altogether?
Math Sentence $6 \times 5 = 30$ Answer donuts
- 7 Look at the following picture and make a multiplication math sentence. Find the answer.
- 1  2 
- $3 \times 5 = 15$ $6 \times 2 = 12$
- 8 How big are the following coloured parts compared to the original size. Answer in fractions.
- 1  $\frac{1}{2}$
- 2  $\frac{1}{4}$
- 3  $\frac{1}{2}$
- 4  $\frac{1}{8}$

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Geometry

Entire Grade-2 Review (2)

1 Find the triangles and the quadrilaterals.

Triangles are **(e), (g), and (i)**
 Quadrilaterals are **(a), (c), and (d)**

2 Which of the following is a right angle?

(a) and (c)

3 Find the rectangles.

(d)

4 Draw the following shapes on the grid below.

- A rectangle with 3 cm sides and 4 cm sides.
- A square with 5 cm sides.
- A right triangle with 2 cm and 3 cm sides that form a right angle.

5 Find the length of the side marked in red.

- 2** cm.
- 1** cm.
- 3** cm.
- 4** cm.

6 When you put these shapes together to make a box, which box will you make, (a), (b), or (c)?

(b)

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Measurement

Entire Grade-2 Review (3)

1 Draw the following lengths as straight lines from the points by using a ruler.

- 8 cm
- 7 mm
- 11 cm 3 mm

2 Convert the lengths.

- 10 mm = **1** cm
- 200 cm = **2** m
- 4 m = **400** cm
- 35 mm = **3** cm **5** mm
- 146 mm = **14** cm **6** mm
- 203 cm = **2** m **3** cm

3 Calculate the following problems.

- 5 cm + 10 cm = **15** cm
- 7 mm - 3 mm = **4** mm
- 13 m - 6 m = **7** m
- 2 cm 5 mm + 6 cm = **8** cm **5** mm
- 2 m 30 cm - 20 cm = **2** m **10** cm
- 3 m 60 cm - 1 m 20 cm = **2** m **40** cm
- 3 cm 4 mm + 4 cm 7 mm = **8** cm **1** mm
- 4 m 20 cm - 55 cm = **3** m **65** cm

4 The time is 9:25 now. Write the time points that shows the following times.

- 20 minutes after It is **9:45**
- 3 hours before It is **6:25**

5 The following tape diagram shows hours in a day from 12:00 a.m.

1 What are the time points to A and B using a.m. and p.m.?

(a) Time point A **6:00 a.m.** (b) Time point B **12:00 p.m.**

2 Fill in the blanks

(a) A day equals **24** hours. 24 hours equals **1** day.

6 Match the same capacities with a line.

- 900 mL**
- 1 L 70 mL**
- 170 mL**

7 Convert the capacities to dL and mL.

- 1 L = **1000** mL
- 30 dL = **3** L
- 5 dL = **500** mL
- 1 L 2 dL = **1200** mL

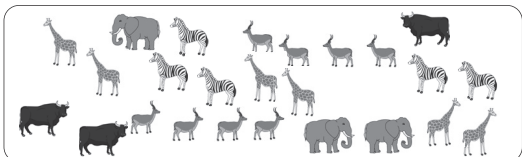
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Data Utilization

Entire Grade-2 Review (4)

1 A student is watching animals at the national park.



1 Tally them on the graph using a ○.

Giraffe	○ ○ ○ ○ ○ ○								
Elephant	○ ○ ○								
Zebra	○ ○ ○ ○ ○								
Gazelle	○ ○ ○ ○ ○ ○ ○ ○								
Cow	○ ○ ○								

2 Fill the numbers in the table.

Name of animals	Number of animals
Giraffe	6
Elephant	3
Zebra	5
Gazelle	8
Cow	3

3 How many zebras are there?

5

4 What is the most common animal in the park?

Gazelle

2 Find out what kind of colors are popular in your class.

Red	○ ○ ○ ○								
Orange	○ ○ ○ ○ ○								
Yellow	○ ○ ○								
Green	○ ○ ○ ○ ○ ○								
Blue	○ ○ ○ ○ ○ ○ ○ ○								
Brown	○ ○ ○ ○								
Purple	○ ○								

Name of subjects	Number of students
Red	4
Orange	5
Yellow	3
Green	6
Blue	8
Brown	4
Purple	2

1 How many students like yellow?

3

2 What color do 5 students like?

Orange

3 What is the most popular color in the class?

Blue

4 What is the least popular color in the class?

Purple

5 Four students like red. What other colour does the same number of students like?

Brown

