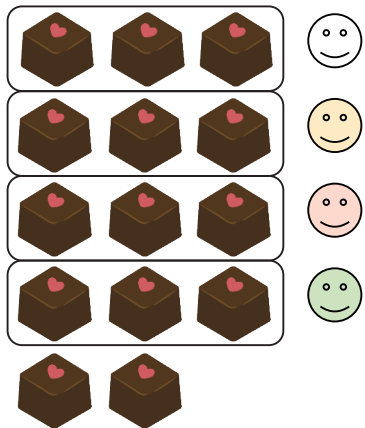


7 - 1

Division with Remainders

How Many People ?

Example There are 14 chocolates. If we give 3 chocolates to each child, how many children can get chocolates?



If you divide 14 chocolates by giving 3 to each child, you can give chocolates to 4 children and 2 will be left.

You can write the math sentence as follows:

$$14 \div 3 = 4 \quad R 2$$

Answer children can get chocolates and chocolates will be left.

Answer the following questions.

- 1 There are 21 flowers. If we give 5 flowers to each person, how many people can get flowers?

Math sentence

Answer people can get flowers and flower will be left.

- 2 There are 31 biscuits. If we give 6 biscuits to each child, how many children can get biscuits?

Math sentence

Answer children can get biscuits and biscuit will be left.

- 3 There is a ribbon that is 60 cm long. We need pieces of ribbon that are 7 cm long each. How many pieces of ribbon can we get?

Math sentence

Answer We can get pieces of ribbon and cm of ribbon will be left.


7 - 2

Division with Remainders

How Many for One Person ?

Example There are 16 biscuits. If we divide evenly them among 3 people, how many biscuits will each person get? How many biscuits will be left?

When each person gets

4 biscuits \rightarrow $4 \times 3 = 12$  $16 - 12$ \rightarrow 4 biscuits are left

5 biscuits \rightarrow $5 \times 3 = 15$ $16 - 15$ \rightarrow 1 biscuits are left

6 biscuits \rightarrow $6 \times 3 = 18$ $16 - 18$ \rightarrow 2 biscuits short

Math sentence

$$16 \div 3 = 5 \text{ R } 1$$

Answer

Each person can get biscuits. biscuit will be left.

Answer the following questions.

- 1 There are 14 pieces of candy. If we divide them evenly among 4 children, how many pieces of candy will each child get?

Math sentence

Answer Each child can get pieces of candy and pieces will be left.

- 2 There are 23 pencils. If 5 students divide them evenly, how many pencils will each student get?

Math sentence

Answer Each student can get pencils and pencils will be left.

- 3 There are 40 lemons. If we divide them evenly among 7 people, how many lemons will each person get?

Math sentence

Answer Each people can get lemons and lemons will be left.

7 - 3

Division with Remainders

Checking the Answer

Instruction You can check the answer to the division of $23 \div 4$ by doing the calculation shown below.



$$\begin{array}{r} 23 \div 4 = 5 \text{ R } 3 \\ \underline{4 \times 5} \\ 4 \times 5 + 3 \end{array}$$

$$23 \div 4 = 5 \text{ R } 3$$

$$4 \times 5 + 3 = 23$$

Example Calculate the following and check the answer by writing the numbers in the .

$$35 \div 4 = \boxed{8} \text{ R } \boxed{3}$$

Check the answer

$$\boxed{4} \times \boxed{8} + \boxed{3} = \boxed{35}$$

Calculate the following problems and check the answer by writing the numbers in the .

1 $33 \div 4 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$

2 $15 \div 9 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$

3 $14 \div 3 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$

4 $24 \div 9 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$

5 $51 \div 8 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$

6 $33 \div 9 = \boxed{} \text{ R } \boxed{}$

Check the answer

$$\boxed{} \times \boxed{} + \boxed{} = \boxed{}$$



Look at 2, 4 and 6. The dividends are "15," "24," and "33," respectively. If the dividends will be "42" and "51," how about the answers?

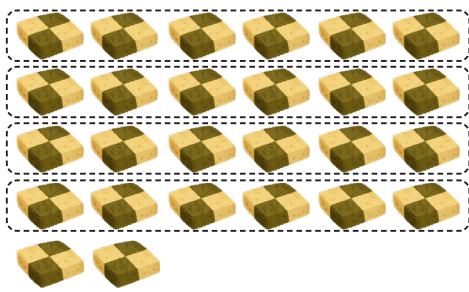
7 - 4

Division with Remainders

Division Problems

Example

There are 26 biscuits. We are going to divide the biscuits so each person can get 6 biscuits. How many people can get biscuits and how many biscuits will be left?



Math sentence

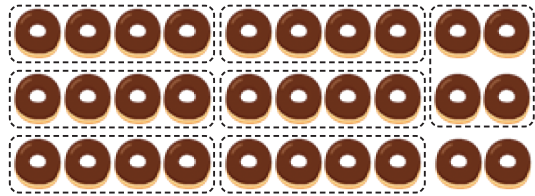
$$26 \div 6 = 4 \text{ R } 2$$

Answer

4 people can get biscuits and 2 biscuits will be left.

Answer the following questions.

- 1 There are 30 donuts. We are going to divide the donuts so each child can get 4 donuts. How many children can get donuts and how many donuts will be left?



Math sentence

Answer

- 2 We are dividing 32 chocolates among 9 people evenly. How many chocolates will each person get and how many chocolates will be left?

Math sentence

Answer

- 3 There are 45 sheets of coloured paper. There are 8 students and each student will receive 5 sheets each. Will there be enough coloured paper?

Math sentence

Answer

7 - 5

Division with Remainders

Problems Dealing with Remainders (1)

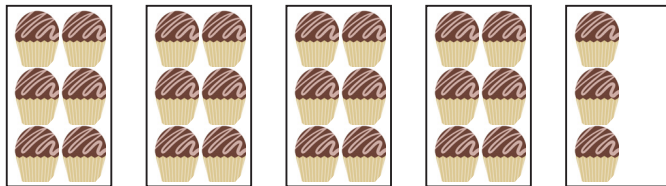
Example There are 27 sweets. We are going to put 6 sweets in one box. How many boxes do we need if we put all sweets in boxes?



$27 \div 6 = 4 \text{ R}3$. If we have 4 boxes, the remaining 3 sweets do not fit in the box. There is another box to put the remaining 3 sweets.

Math sentence

$$27 \div 6 = 4 \text{ R}3 \quad 4 + 1 = 5$$



Answer

5 boxes

Answer the following questions.

- 1 There are 30 balls. We are going to put all the balls in boxes, 4 balls per box. How many boxes do we need?

Math sentence

- 2 There are 43 children. Five children are going to sit on one bench. How many benches are needed so all the children can sit on benches?

Math sentence

Answer

- 3 There is a 78 page book. If I read 8 pages in one day, how many days will it take me to finish reading this book?

Math sentence

Answer

7 - 6

Division with Remainders

Problems Dealing with Remainders (2)

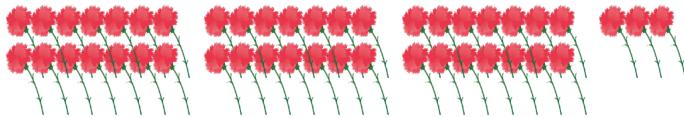
Example We have 45 flowers. We are making bouquets that have 7 flowers each. How many bouquets can we make?



$45 \div 7 = 6 \text{ R}3$. We can make 6 bouquets and 3 flowers will be left. The remaining 3 flowers are not enough to make a bouquet because 7 flowers are necessary to make a bouquet.

Math sentence

$$45 \div 7 = 6 \text{ R}3$$



Answer

6 bouquets

Answer the following questions.

- 1 There are 47 buttons. We need 7 buttons to make one shirt. How many shirts can we make in total?

Math sentence

Answer

- 2 We are making fresh orange juice. There are 26 oranges. We need 4 oranges to make a glass of juice. How many glasses of orange juice can we make?

Math sentence

Answer

- 3 There is a bookshelf that is 28 cm wide. We want to put books that are 3 cm wide each on the shelf. How many of these books can we put on the bookshelf?

Math sentence

Answer

7 - 7

Division with Remainders

Remainders (1)

Example Divide the numbers in the following table by 3. Put a ○ for divisible numbers, a □ for numbers with R 1, and a △ for numbers with R 2.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30

1 Divide the numbers in the following table by 2. Put a ○ for divisible numbers and a □ for numbers with R 1.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20

2 Divide the numbers in the following table by 4. Put a ○ for divisible numbers, a □ for numbers with R 1, a △ for numbers with R 2 and a × for numbers with R 3.

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17	18	19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40

7 - 8

Division with Remainders

Remainders (2)

Example The following table shows the remainders. Write the numbers in the blanks.

	2	3	4	5	6	7	8	9	10	11
÷2	1	1	2	2	3	3	4	4	5	5
R	0	1	0	1	0	1	0	1	0	1



$2 \div 2 = 1$, so it is divisible and write "0." Then $3 \div 2 = 1$ R1, so write "1."

The following tables show the remainders. Write the numbers in the blanks.

1

	3	4	5	6	7	8	9	10	11	12
÷3	1	1	1							
R	0	1								

2

	4	5	6	7	8	9	10	11	12	13
÷4	1	1								
R	0	1								

3

	5	6	7	8	9	10	11	12	13	14
÷5	1	1								
R	0									

4

	6	7	8	9	10	11	12	13	14	15
÷6	1									
R	0									

5

	7	8	9	10	11	12	13	14	15	16
÷7	1									
R										

1 Calculate the following problems and check the answer by writing the numbers in the .

1 $25 \div 6 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

2 $18 \div 7 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

3 $35 \div 8 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

4 $53 \div 8 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

5 $37 \div 4 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

6 $16 \div 9 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

7 $11 \div 3 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

8 $25 \div 9 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

9 $47 \div 6 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$

10 $34 \div 9 = \square \text{ R } \square$

Check the answer

$$\square \times \square + \square = \square$$



Look at the above division problems 6, 8 and 10. The dividends are “16,” “25,” and “34,” respectively. If the dividends will be “43,” “52,” “61,” “70,” how about the answers? Can you find an interesting rule?

2 Explain the mistakes in the following calculations. Then calculate them correctly.

1 $13 \div 2 = 5 \text{ R } 3$

2 $41 \div 6 = 7 \text{ R } 1$

3 $55 \div 6 = 9 \text{ R } 2$

4 $35 \div 7 = 4 \text{ R } 7$

3 Answer the following questions.

1 There are 40 apples. We are going to divide the apples so each child can get 6 apples. How many children can get apples and how many apples will be left?

Math sentence

Answer

2 We are dividing 25 chocolates among 3 people evenly. How many chocolates will each person get and how many chocolates will be left?

Math sentence

Answer

3 There is a 56-page book. If I read 9 pages in one day, how many days will it take me to finish reading this book?

Math sentence



Let's think about how to handle the number of remainder.

Answer