Entire Grade-6 Review (1)

1 Calculate the following multiplication problems.

1 $\frac{2}{7} \times 3$　　**2** $\frac{2}{3} \times \frac{4}{5}$　　**3** $\frac{7}{12} \times \frac{3}{14}$　　**4** $\frac{13}{16} \times \frac{32}{13}$

5 $\frac{5}{9} \times 3\frac{3}{4}$　　**6** $27 \times \frac{4}{9}$　　**7** $0.3 \times \frac{5}{6}$　　**8** $2\frac{2}{9} \times 0.6$

1		**2**		**3**		**4**	
5		**6**		**7**		**8**	

2 Calculate the following division problems.

1 $\frac{8}{9} \div 4$　　**2** $\frac{5}{6} \div \frac{5}{8}$　　**3** $\frac{2}{3} \div \frac{4}{9}$　　**4** $\frac{11}{18} \div \frac{11}{20}$

5 $\frac{1}{18} \div 1\frac{1}{12}$　　**6** $2\frac{1}{4} \div 1\frac{1}{6}$　　**7** $4 \div \frac{8}{5}$　　**8** $0.7 \div \frac{1}{4}$

1		**2**		**3**		**4**	
5		**6**		**7**		**8**	

3 Calculate the following problems.

1 $\frac{3}{4} \times \left(\frac{1}{12} \times \frac{16}{17} \right)$　**2** $\frac{5}{12} \times \frac{5}{6} \times \frac{18}{25}$　　**3** $\frac{2}{5} \times \left(\frac{5}{3} + \frac{5}{6} \right)$

4 $\frac{3}{8} \times \left(\frac{8}{9} + \frac{16}{3} \right)$　**5** $\frac{12}{25} \times \left(\frac{5}{4} - \frac{1}{6} \right)$　**6** $\frac{7}{10} \times \left(\frac{10}{21} - \frac{5}{28} \right)$

7 $\frac{2}{19} \times \frac{5}{6} + \frac{2}{19} \times \frac{2}{9}$　　　　**8** $\frac{1}{22} \times \frac{3}{4} - \frac{1}{22} \times \frac{1}{5}$

1		**2**		**3**		**4**	
5		**6**		**7**		**8**	

4 Which product is more than 8. Write the letter of the correct math sentence.

(a) $8 \times \dfrac{3}{5}$　　　(b) 8×1　　　(c) $8 \times \dfrac{18}{15}$　　　(d) $8 \times 1\dfrac{1}{2}$

(e) $8 \div \dfrac{4}{7}$　　　(f) $8 \div \dfrac{10}{9}$

Answer _____

5 Read the following problems and write a math sentence using the letter x.

1 Length of the perimeter of a square. One side is x cm long.
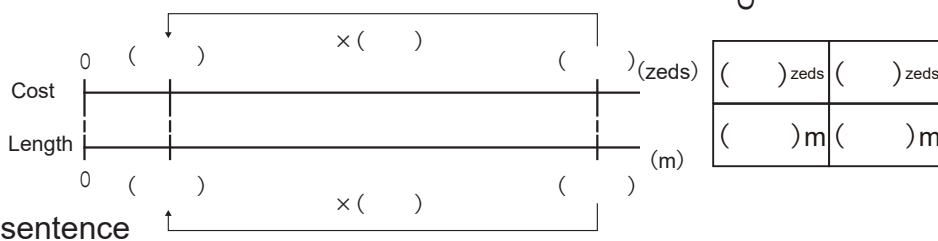
Answer _____

2 Price of 3 notebooks. One notebook costs x zeds*.
("zed(s)" is the fictional currency unit.)

Answer _____

3 Total weight when x g of candy is put in a 200 g box.

Answer _____

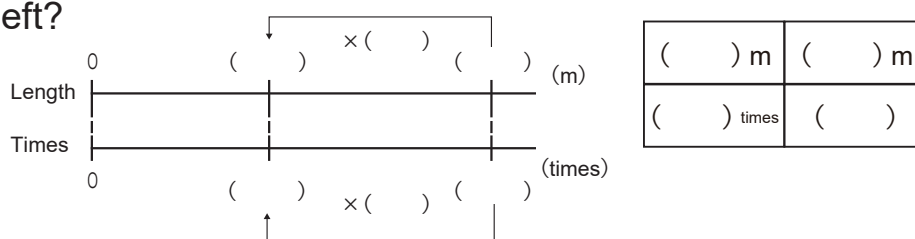**6** 1 m of rope costs 30 zeds*. How much does $\dfrac{1}{6}$ m of this rope cost?

(　　) zeds	(　　) zeds
(　　) m	(　　) m

Complete the number line diagrams and tables.

Math sentence

Answer _____

7 I have a 30 m long ribbon. I used $\dfrac{7}{15}$ of this ribbon. How many m of ribbon do I have left?

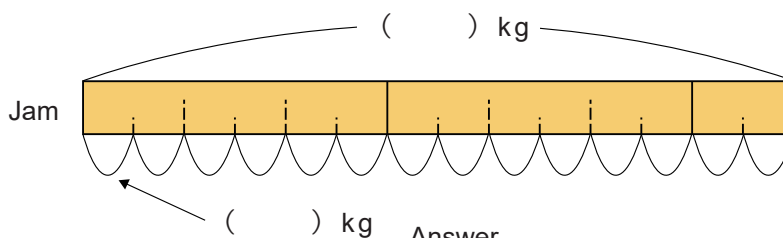Math sentence

(　　) m	(　　) m
(　　) times	(　　)

Answer _____

8 There is $2\dfrac{1}{3}$ kg of strawberry jam. If you divide the jam into bottles that can hold $\dfrac{1}{6}$ kg each, how many bottles can you fill?
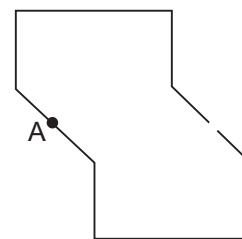
Math sentence

Answer _____

Entire Grade-6 Review (2)

1   The figure on the right is a point symmetric figure. Answer the following questions.
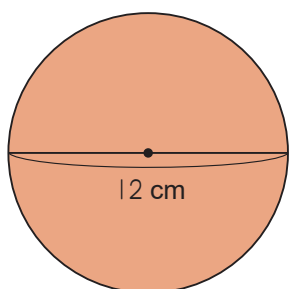
①   Draw the point of symmetry on the figure.

A

②   Draw in the figure the corresponding point B to point A
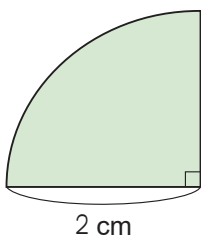
2   Find the area of the following figures.

①

12 cm

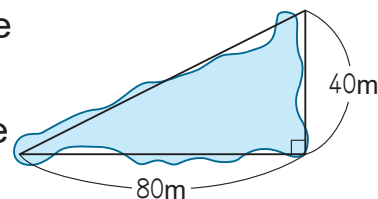Math
sentence

Answer   _____

②

2 cm

Math
sentence

Answer   _____

3   The illustration below shows a forest. Answer the following questions.

①   What kind of shape can you use it to find the area?
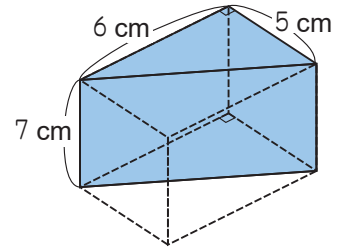
40m

80m

②   Find the approximate area.

Math
sentence

Answer   _____

4 Fill in the blank with numbers to find the volume of the triangular prism on the right.

6 cm 5 cm

7 cm

1 The triangle prism is half of a cuboid.
The volume of a cuboid is found by
(Length) × (Width) × (Height),

$$\boxed{} \times \boxed{} \times \boxed{} \div \boxed{} = \boxed{} \ \text{cm}^3$$

Volume of the cuboid

2 Find the volume using the area of the base, (Area of the base) × (Height)

$$\boxed{} \times \boxed{} \div \boxed{} \times \boxed{} = \boxed{} \ \text{cm}^3$$

Area of the base

5 Triangle DBE is an enlarged drawing of triangle ABC. Answer the following questions.

D
A
6 cm
4 cm
50°
B 5 cm C E

1 How many times is it enlarged?

Math
sentence
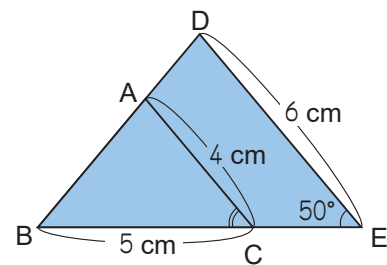
2 Find the length of side BE.

Math
sentence

3 Find the size of angle C.

6 There is a map of a school that is drawn in $\dfrac{1}{500}$ reduced scale. In the reduced drawing, the gymnasium has a rectangular shape with a length that is 10 cm long and a width that is 8 cm long. How many meters is the actual and width of the hall?

Length :

Math
sentence

Answer _____

Width :

Math
sentence

Answer _____

165

Entire Grade-6 Review (3)

1   The table below shows the time of walking and distance you go.
If you walk at a speed of 40 m per minute, let y m be the distance you travel in x minutes. Answer the following questions.

Time x (minutes)	0	1	2	3	4	5	6	⋯
Distance y (m)	0	40	80	120				⋯

1   Write the number that fits in the blank in the table below.

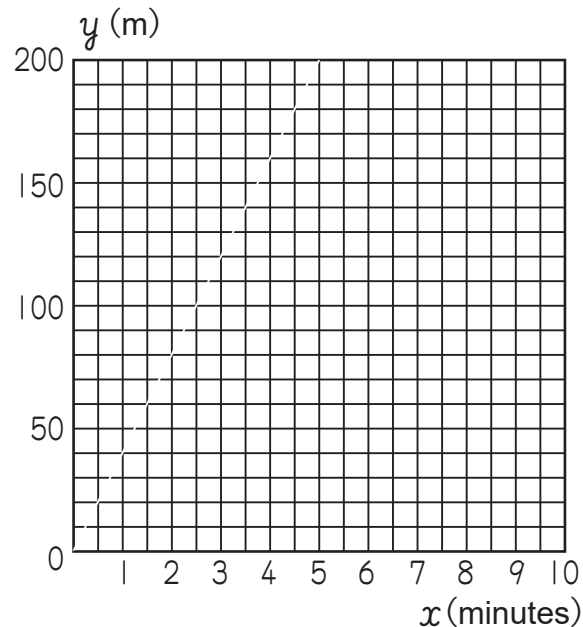**2**   What is the relationship between time and distance ?

Answer _____

3   Express the relationship between x and y in terms of a math sentence.

Answer _____

4   Draw a graph representing x and y.

5   How many meters do you walk when you walk for 30 minutes?

Math sentence

Answer _____

y (m)

200

150

100

50

0

1 2 3 4 5 6 7 8 9 10

x (minutes)

2   The table below shows the time of driving a car and speed you go. Let x time be the time it takes you to travel 120 km at a speed of y per hour. Answer the following questions.

Time (hours) x	1	2	3	4	5	6	⋯
Speed (km/hour) y	120	60	40				⋯

1   Write the number that fits in the blank in the table below.

2   If the value of x doubles or triples, how does the value of y change?

Answer _____

3   What is the relationship between x and y?

Answer _____

4   Express the relationship between x and y in an math sentence?

Answer _____

5   If the time is 8 hours, what is the speed?

Math sentence   Answer _____

166

3 Express the following proportions as simple ratios.

(a) The ratio of the length of a rectangle 35 cm to its width 21 cm.

Answer _____

(b) Ratio of 150 mL rice to 180 mL water.

Answer _____

4 Find the number that applies to x.

(a) $8 : 5 = x : 25$ Answer _____

(b) $x : 20 = 5 : 4$ Answer _____

5 Simplify the following ratios.

(a) $36 : 28$ Answer _____   (b) $420 : 350$ Answer _____

(c) $5.6 : 2.1$ Answer _____   (d) $0.6 : 3.8$ Answer _____

(e) $\dfrac{1}{6} : \dfrac{3}{10}$ Answer _____   (f) $\dfrac{2}{7} : \dfrac{2}{9}$ Answer _____

6 My brother and sister have a coloured paper. The ratio of the number of sheets is $5 : 3$ accordingly. My brother has 30 sheets. How many sheets of coloured paper does my sister have?

Math sentence _____   Answer _____

7 We measured the length of the shade of a tree in the school and found it to be 9 m. If you put a stick 0.6 m long, the length of its shade is 1.5 m. What is the height of the tree?.

Math sentence _____   Answer _____

8 The 3,000 zeds given to your family by your father will be divided $3 : 2$ between your brother and sister. How many zeds will my brother and sister get?

1 Find the total ratio.

2 How many zeds will my brother get?

Math sentence _____   Answer _____

3 How many zeds will my sister get?

Math sentence _____   Answer _____

167

Entire Grade-6 Review (4)

1 The following information is the records of classmates' weight.

37, 43, 41, 30, 49, 38, 36, 42, 39, 37, 32, 43, 37, 30, 35, 39 (kg)
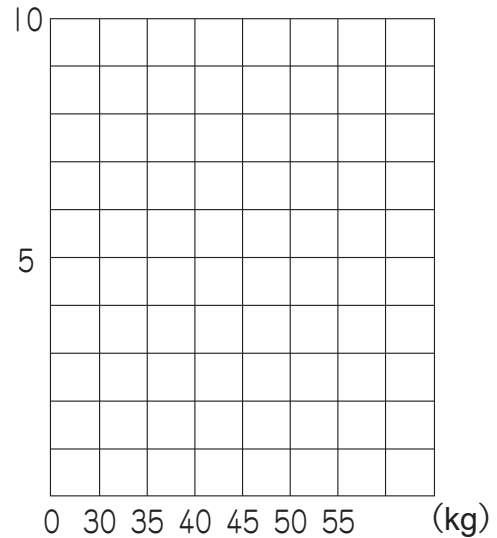
1 Find the mean of the weight.

Math
sentence

2 Complete frequency table and histogram.

Record of Classmates' Weight

Weight (kg)		Number of student
more than or equal to 30 ~ less than 35		
35 ~ 40		
40 ~ 45		
45 ~ 50		
Total		

(People)
10

5

0 30 35 40 45 50 55 (kg)

3 Where does the student who is 10th of the lightest belong?

4 How much % of the number of students who are in more than or equal to 40 kg and less than 45 kg? Round the second decimal place.

Math
sentence

168

2 A boy tosses a coin 3 times. In how many ways does he get heads and tails?

Consider the case where it gets head first. Complete the table and diagram below. Let head and tail be H and T, respectively.

Ist	2nd	3rd
H	H	H
H	H	T
H		
H		

Ist   2nd   3rd

H — H < H / T

H — □ < □ / □

How many ways are there in all?

[ ]

3 You are making four-digit passwords using numerals. For each of the following situations, figure out how many different passwords are possible.

1 Using each numeral 1, 2, 3, and 4 once

[ ]

2 If you use the numerals $0-9$, and if you can use each numerals as many times as you like.

[ ]

4 A girl is buying 2 flavors of ice cream from 5 choices: banana, chocolate, strawberry, vanilla, and walnut. How many combinations of flavor possible? Let banana, chocolate, strawberry, vanilla, and walnut be B, C, S, V, and W.

Combinations [   ]

The number of cases [   ]

169