

Calculating fractions of a quantity

- 1** Emily has three different-sized teddy bears – a small teddy bear, a medium teddy bear and a large teddy bear.

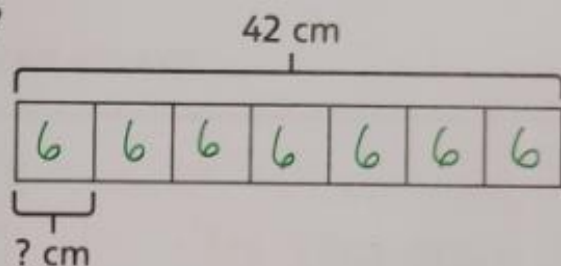
The large teddy bear is 42 cm tall.



- a) The small teddy bear is $\frac{1}{7}$ the height of the large teddy bear.

How tall is the small teddy bear?

$$\boxed{42} \div \boxed{7} = \boxed{6}$$



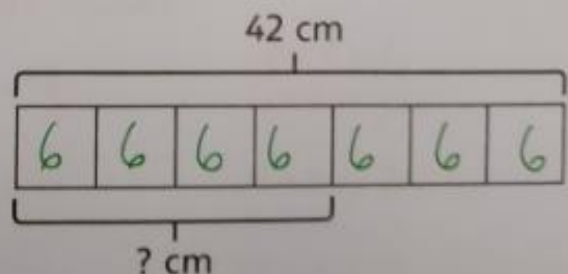
The small teddy bear is $\boxed{6}$ cm tall.

- b) The medium teddy bear is $\frac{4}{7}$ the height of the large teddy bear.

How tall is the medium teddy bear?

$$\boxed{42} \div \boxed{7} = \boxed{6}$$

$$\boxed{6} \times \boxed{4} = \boxed{24}$$



The medium teddy bear is $\boxed{24}$ cm tall.

2 Complete each question.

a) $\frac{1}{3}$ of 30 m = 10 m

b) $\frac{2}{3}$ of 27 kg = 18 kg

c) $\frac{5}{6}$ of £18 = £ 15

$\frac{1}{3}$ of 30 : $30 \div 3 = 10$

$\frac{2}{3}$ of 27 : $27 \div 3 = 9$
 $9 \times 2 = 18$

$\frac{5}{6}$ of 18 : $18 \div 6 = 3$
 $3 \times 5 = 15$

3 Is this statement true or false?

$\frac{3}{8}$ of 24 = $\frac{1}{4}$ of 36

Show your working out and circle your answer.

$\frac{3}{8}$ of 24 : $24 \div 8 = 3$
 $3 \times 3 = 9$

$\frac{1}{4}$ of 36 : $36 \div 4 = 9$

Yes, they are the same.

9

4 Match each calculation to the correct answer.

$\frac{2}{3}$ of 18

$\frac{1}{9}$ of 18

$\frac{5}{6}$ of 18

$\frac{7}{18}$ of 18

15

7

2

12

$18 \div 3 = 6$
 $6 \times 2 = 12$

$18 \div 9 = 2$

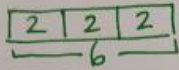
$18 \div 6 = 3$
 $3 \times 5 = 15$

$18 \div 18 = 1$
 $7 \times 1 = 7$

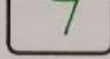
5 Complete the following calculations.



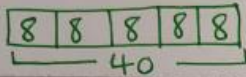
a) $\frac{1}{3}$ of $\boxed{6} = 2$



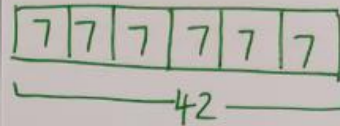
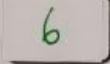
c) $\frac{1}{7}$ of 70 kg = 10 kg



b) $\frac{1}{5}$ of $\boxed{40} = 8$



d) $\frac{5}{6}$ of 42 = 35



$$\frac{1}{6} = 7$$

$$\frac{5}{6} = 42$$

6 Chloe got $\frac{5}{7}$ of her test correct.

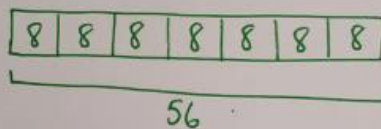
Mike got $\frac{3}{8}$ of the same test incorrect.

The test was out of 56 marks.

Who got more marks and by how many? *Chloe got 19 more marks.*



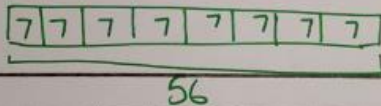
$\frac{5}{7}$ of 56 = 40



$$56 \div 7 = 8$$

$$8 \times 5 = 40$$

$\frac{3}{8}$ of 56 = 21



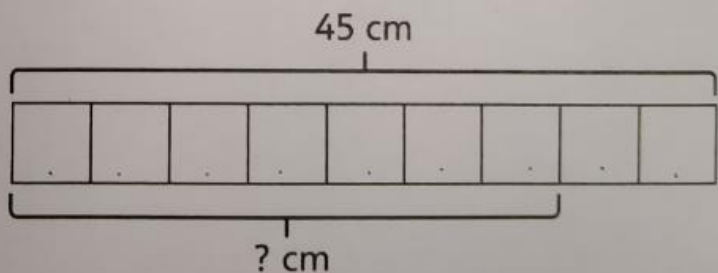
$$56 \div 8 = 7$$

$$7 \times 3 = 21$$

$$40 - 21 = 19$$

Reflect

Write a question that could go with this diagram.



- Any question that divides 45 by 9 and
- then asks for $\frac{7}{9}$ of 45.