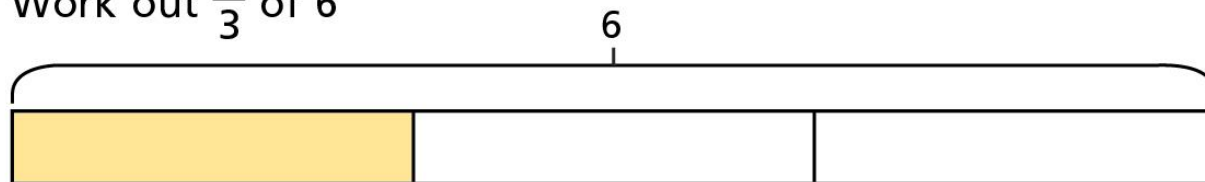


# Fractions as operators

1 a) Work out  $\frac{1}{3} \times 6$


$$\frac{1}{3} \times 6 = \frac{\square}{3} = \square$$

b) Work out  $\frac{1}{3}$  of 6



$$\frac{1}{3} \text{ of } 6 = \square \div \square = \square$$





1 c) What is the same about these calculations?

d) Work out  $\frac{2}{3}$  of 6

$$\frac{2}{3} \text{ of } 6 = \square \div \square \times 2 = \square$$

e) Work out  $\frac{2}{3} \times 6$


$$\frac{2}{3} \times 6 = \square = \square$$

2 Complete the calculations.

a)  $\frac{1}{3} \times 12 = \square$

$\frac{1}{3}$  of 12 =  $\square$

b)  $12 \times \frac{1}{4} = \square$

$\frac{1}{4}$  of 12 =  $\square$

c)  $12 \times \frac{2}{3} = \square$

$\frac{2}{3}$  of 12 =  $\square$

d)  $\frac{3}{4} \times 12 = \square$

$\frac{3}{4}$  of 12 =  $\square$

What do you notice?



3 Tick the calculation in each pair that is easier to work out.

a)  $\frac{1}{5} \times 7$

$\frac{1}{5}$  of 7

b)  $\frac{1}{5} \times 10$

$\frac{1}{5}$  of 10

c)  $\frac{3}{5} \times 10$

$\frac{3}{5}$  of 10

d)  $\frac{3}{10} \times 5$

$\frac{3}{10}$  of 5

Compare answers with a partner.



4

Complete the calculations.

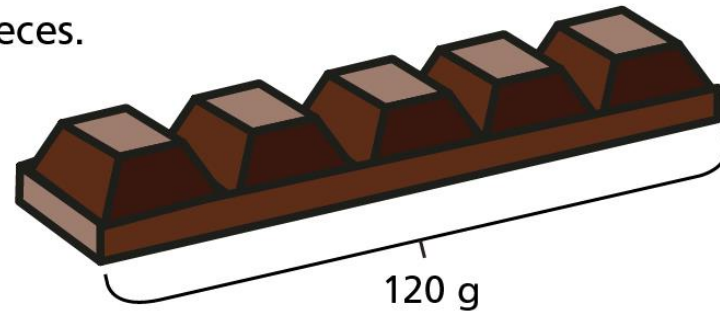
$$\text{a) } \frac{5}{6} \times 12 = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ of } 12 = \boxed{\phantom{00}}$$

$$\text{b) } \frac{3}{4} \times 24 = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ of } 24 = \boxed{\phantom{00}}$$

$$\text{c) } \frac{2}{7} \times \boxed{\phantom{00}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \text{ of } 28 = \boxed{\phantom{00}}$$

$$\text{d) } \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} \times 45 = \frac{4}{5} \text{ of } \boxed{\phantom{00}} = \boxed{\phantom{00}}$$

- 5 A bar of chocolate has 5 equal pieces.  
The whole bar weighs 120 g.



How much do three pieces weigh?

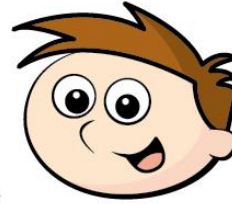
- a) Write two calculations that will give the answer to the problem.
- b) Work out the answer.

Three pieces of chocolate weigh

6 Teddy and Annie are working out  $\frac{3}{7} \times 42$

a)

I will multiply 42 by  $\frac{3}{7}$



Teddy

Use Teddy's method to work out the calculation.

b)



Annie

I will find  $\frac{3}{7}$  of 42

Use Annie's method to work out the calculation.

6

c) Whose method do you prefer? \_\_\_\_\_

Explain why.

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d) When is it easier to find fractions of amounts rather than multiply fractions?

Give some examples for each method.

