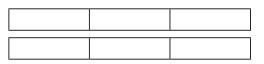
## Fractions as operators



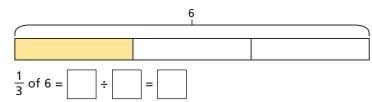
1

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



$$\frac{1}{3} \times 6 = \frac{\boxed{\phantom{0}}}{3} = \boxed{\phantom{0}}$$

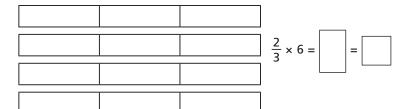
**b)** Work out  $\frac{1}{3}$  of 6



- c) What is the same about these calculations?
- d) Work out  $\frac{2}{3}$  of 6

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

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





2 Complete the calculations.

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

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

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

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

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

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

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

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

What do you notice?



Which calculation in each pair is easier to work out?

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

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

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

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



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

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

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

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

Compare answers with a partner.



4 Complete the calculations.

a) 
$$\frac{5}{6} \times 12 = \frac{\phantom{0}}{\phantom{0}}$$
 of  $12 = \frac{\phantom{0}}{\phantom{0}}$ 

b) 
$$\frac{3}{4} \times 24 = \frac{}{}$$
 of  $24 =$ 

## Fractions as operators



- Complete the calculations.
  - a)  $\frac{1}{3} \times 12 =$

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

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

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

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

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

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

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

What do you notice?



- Which calculation in each pair is easier to work out?
  - a)  $\frac{1}{5} \times 7$
- $\frac{1}{5}$  of 7
- c)  $\frac{3}{5} \times 10$
- $\frac{3}{5}$  of 10

- **b)**  $\frac{1}{5} \times 10$
- $\frac{1}{5}$  of 10
- d)  $\frac{3}{10} \times 5$
- 3 10 of 5

Compare answers with a partner.



Complete the calculations.

a) 
$$\frac{5}{6} \times 12 = \frac{}{}$$
 of  $12 =$ 

**b)** 
$$\frac{3}{4} \times 24 = \frac{}{}$$
 of  $24 =$ 

- c)  $\frac{2}{7} \times \boxed{ } = \boxed{ } \text{ of } 28 = \boxed{ } \text{ d) } \boxed{ } \times 45 = \frac{4}{5} \text{ of } \boxed{ } = \boxed{ }$
- A bar of chocolate has 5 equal pieces.

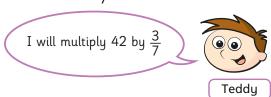
  The whole bar weighs 120 g.

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

a)



Use Teddy's method to work out the calculation.

b)



Use Annie's method to work out the calculation.

- c) Whose method do you prefer? Explain why.
- d) When is it easier to find fractions of amounts rather than multiply fractions?
   Give some examples for each method.

