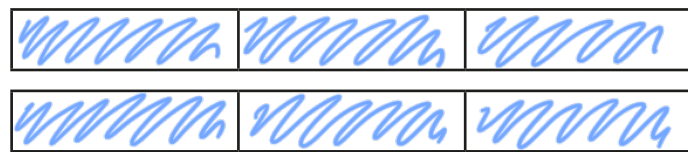


Fractions as operators

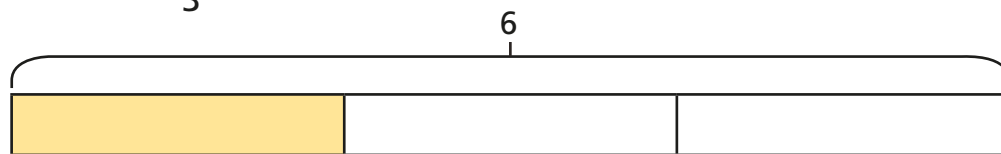


- 1 a) Work out $\frac{1}{3} \times 6$



$$\frac{1}{3} \times 6 = \frac{6}{3} = 2$$

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



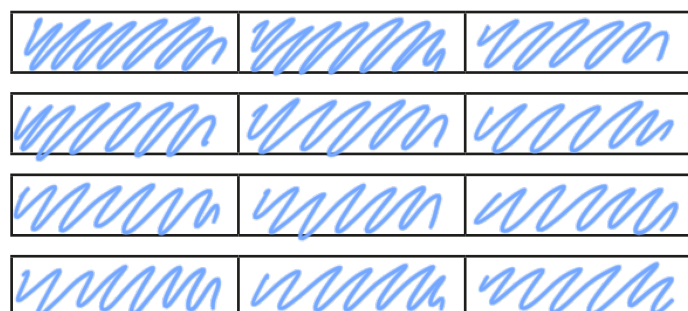
$$\frac{1}{3} \text{ of } 6 = 6 \div 3 = 2$$

- c) What is the same about these calculations?

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

$$\frac{2}{3} \text{ of } 6 = 6 \div 3 \times 2 = 4$$

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



$$\frac{2}{3} \times 6 = \frac{12}{3} = 4$$

- 2 Complete the calculations.

a) $\frac{1}{3} \times 12 = 4$

$\frac{1}{3}$ of 12 = 4

c) $12 \times \frac{2}{3} = 8$

$\frac{2}{3}$ of 12 = 8

b) $12 \times \frac{1}{4} = 3$

$\frac{1}{4}$ of 12 = 3

d) $\frac{3}{4} \times 12 = 9$

$\frac{3}{4}$ of 12 = 9

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.

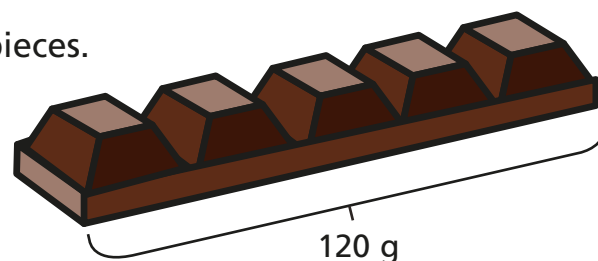
a) $\frac{5}{6} \times 12 = \frac{5}{6}$ of 12 = 10

b) $\frac{3}{4} \times 24 = \frac{3}{4}$ of 24 = 18

c) $\frac{2}{7} \times 28 = \frac{2}{7}$ of 28 = 8

d) $\frac{4}{5} \times 45 = \frac{4}{5}$ of 45 = 36

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



How much do three pieces weigh?

a) Write two calculations that will give the answer to the problem.

$\frac{3}{5}$ of 120 $\frac{3}{5} \times 120$

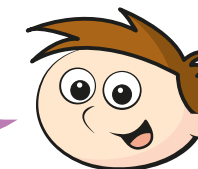
b) Work out the answer.

Three pieces of chocolate weigh 72g

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

a)

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



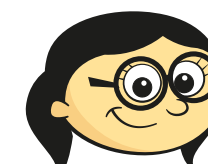
Teddy

Use Teddy's method to work out the calculation.

$42 \times \frac{3}{7} = \frac{126}{7} = 18$

18

b)



Annie

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

Use Annie's method to work out the calculation.

18

c) Whose method do you prefer? _____

Explain why.

Various answers

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

Give some examples for each method.

