

1 Direct proportion

A recipe for 4 muffins uses:

Flour	Eggs	Sugar
100 g	2	60 g

- a) How much flour for 8 muffins?
b) How much sugar for 12 muffins?

a) 8 is 2×4 : $2 \times 100 = 200$ g
b) 12 is 3×4 : $3 \times 60 = 180$ g

2 Direct proportion

5 notebooks cost £4.

- a) Work out the cost of 1 notebook.
b) Work out the cost of 7 notebooks.

a) $400 \div 5 = 80$ p
b) $7 \times 80 = £5.60$

3 Inverse proportion

3 cleaners take 4 hours to clean a hall.
They all work at the same rate.

- a) How long would 1 cleaner take?
b) How long would 6 cleaners take?

a) $3 \times 4 = 12$ hours
b) $12 \div 6 = 2$ hours

4 Inverse proportion

A bike ride takes 3 hours at a speed of 20 mph.

- a) How far is the ride?
b) How long does the same ride take at 30 mph?

a) $20 \times 3 = 60$ miles
b) $60 \div 30 = 2$ hours

5 Proportion equations

$y = 5x$

- a) Work out y when $x = 3$.
b) Work out x when $y = 40$.

a) $5 \times 3 = 15$
b) $40 \div 5 = 8$

6 Proportion equations

x	2	3	4	6
y	18	12		

- a) Work out $x \times y$ for the first two columns.
b) Complete the table.

a) $2 \times 18 = 36$, $3 \times 12 = 36$
b) $36 \div 4 = 9$, $36 \div 6 = 6$

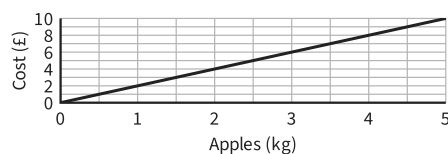
Direct and inverse proportion revision mat answers

Foundation B

7 Direct proportion graphs

The graph shows the cost of apples.

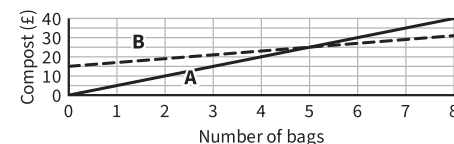
- a) Find the cost of 3 kg of apples.
b) How many kg can you buy for £8?



a) £6 b) 4 kg

8 Direct proportion graphs

- a) Which shop's cost shows direct proportion?
b) Give a reason for your answer.

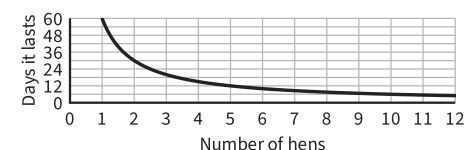


a) A b) straight, through (0, 0)

9 Inverse proportion graphs

The graph is for one sack of hen feed.

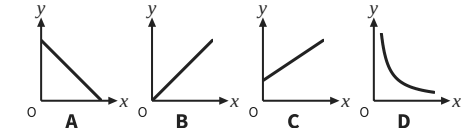
- a) How many days does it last for 2 hens?
b) It lasts 10 days. How many hens?



a) 30 days b) 6 hens

10 Inverse proportion graphs

- a) Which sketch shows direct proportion?
b) Which sketch shows inverse proportion?



a) B: a straight line through 0
b) D: a curve