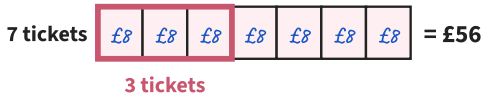
Direct proportion

ANSWERS

1

7 cinema tickets cost £56.
How much do 3 tickets cost?



Find one: £56 ÷ 7 = £8

Scale: 3 × £8 = £24

Answer £24

2

8 candles cost £6. How much do 5 candles cost?



Find one: £6 ÷ 8 = £0.75

Scale: 5 × £0.75 = £3.75

Answer £3.75

3

A 6 m length of copper pipe weighs 18 kg. How much does a 10 m length of the same pipe weigh?



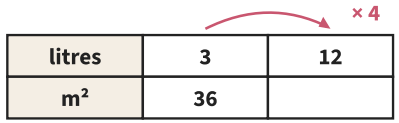
Find one: 1 m = 18 kg ÷ 6 = 3 kg

Scale: 10 × 3 kg = 30 kg

Answer 30 kg

4

3 litres of paint cover 36 m² of wall.
How much wall do 12 litres cover?



Multiplier: 12 ÷ 3 = 4

Scale: 36 × 4 = 144 m²

Answer 144 m²

5

A recipe for 6 muffins uses 150 g of flour, 90 g of sugar and 120 ml of milk. Work out the amounts for 10 muffins.

1 muffin: 25 g, 15 g, 20 ml

× 10

Answer 250 g, 150 g, 200 ml

6

A 75 ml tube of toothpaste costs £1.20. A 125 ml tube costs £1.90. Which tube is better value? Show your working.

120 ÷ 75 = 1.6p a ml

190 ÷ 125 = 1.52p a ml

Answer the 125 ml tube

7

A curry for 4 people uses 6 tomatoes and 400 ml of milk. For 10 people, Ruby adds 6 to each: 12 tomatoes, 406 ml. Explain her mistake and find the right amounts.

she added 6; she should multiply

1 person: 1.5 tomatoes, 100 ml

× 10

Answer 15 tomatoes, 1000 ml

8

10 biscuits need 120 g of flour, 60 g of butter and 40 g of sugar.
Nina has 300 g of flour, 180 g of butter and 80 g of sugar. What is the greatest number of biscuits she can make?

flour 25, butter 30, sugar 20

sugar runs out first

Answer 20 biscuits

Direct proportion *further practice*

ANSWERS

9

12 bread rolls cost £3.84. How much do 5 rolls cost?

1 roll = £3.84 ÷ 12 = £0.32

5 × £0.32

Answer £1.60

10

9 m of fabric costs £31.50.
How many metres can you buy for £14?

1 m = £31.50 ÷ 9 = £3.50

£14 ÷ £3.50

Answer 4 m

11

Washing up liquid comes in three sizes: 450 ml for £1.35, 900 ml for £2.52 and 1.2 litres for £3.48. Which size is the best value?

450 ml: 135 ÷ 450 = 0.3p a ml

900 ml: 0.28p a ml

1.2 litres = 1200 ml: 0.29p a ml

Answer 900 ml

12

Gel pens come in a pack of 5 for £2.40 or a pack of 8 for £3.60. Which pack is better value? Show how you know.

5 for £2.40: 48p a pen

8 for £3.60: 45p a pen

Answer the pack of 8

13

A chilli for 6 people uses 450 g of beans. Sam has 1.2 kg of beans.
How many people can he make chilli for?

1 person: 450 ÷ 6 = 75 g

1.2 kg = 1200 g, 1200 ÷ 75

Answer 16 people

14

A recipe for 8 flapjacks uses 90 g of oats, 40 g of syrup and 20 g of butter.
Ella has 360 g of oats, 150 g of syrup and 100 g of butter. What is the greatest number of flapjacks she can make?

oats 32, syrup 150 ÷ 40 × 8 = 30

butter 40

Answer 30 flapjacks

15

A car uses 6 litres of fuel to travel 80 km. The fuel used is in direct proportion to the distance. How far can it travel on 15 litres?

15 ÷ 6 = 2.5

80 × 2.5

Answer 200 km

16

A taxi costs £7.50 for 3 miles and £13.50 for 6 miles. Ali says the cost is in direct proportion to the distance. Is he right? Explain how you know.

double the miles: 3 to 6

£7.50 × 2 = £15, not £13.50

Answer No