GCSE HIGHER · REVISION MAT 5

Direct and inverse proportion

1 8 m of cloth costs £36.

Find the cost of 5 m.

2 15 people take 4 days to do a job.

How long would 10 people take?

3 Does this table show inverse proportion? Explain.

x	1	2	4
y	12	6	3

4 £1 = €1.15

A bag costs £40 in the UK or €48 in France.

Where is it cheaper?

5 6 litres of paint covers 72 m².

Show that 10 litres covers 120 m².

6 Food lasts 12 people for 15 days.

3 people leave.

How long will the food last?

7 Explain why a graph of journey time against speed, for a fixed distance, is a curve.

8 6 workers take 10 days to do a job.

After 4 days, how many more workers are needed to finish in 3 more days?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 5

Direct and inverse proportion

1 1 m £4.50

£22.50

2 60 person-days

6 days

3 **Yes: $xy = 12$ every time.**

4 £40 = €46

The UK

5 1 litre covers 12 m²

10 × 12 = 120

6 180 person-days

180 ÷ 9 = 20 days

7 **Time is inversely proportional to speed: $t = \frac{d}{s}$.**

8 60 worker-days; 24 done

36 ÷ 3 = 12 workers

6 more

Mr&Mrs MATHS