GCSE HIGHER · REVISION MAT 3

Direct and inverse proportion

1 7 tickets cost £56.

Find the cost of 4 tickets.

2 12 pumps empty a pool in 8 hours.

How long would 16 pumps take?

3 Is the exterior angle of a regular polygon directly or inversely proportional to its number of sides? Explain.

4 A car uses 7 litres per 100 km.

It has 20 litres of fuel.

Is this enough for 245 km?

5 4 m of wire costs £7.

Show that 9 m costs £15.75.

6 Food lasts 20 days for 30 animals.

10 more animals arrive.

How long will the food last now?

7 A graph of y against x is a straight line through (0, 0).

What does this tell you?

8 4 builders build a wall in 9 days.

After 3 days, 2 more builders join.

How many days does the wall take in total?

Mr&Mrs MATHS

ANSWERS · REVISION MAT 3

Direct and inverse proportion

1 1 ticket £8

£32

2 96 pump-hours

6 hours

3 **Inversely: sides × exterior angle = 360°.**

4 2.45 × 7 = 17.15 litres

Yes

5 1 m £1.75

9 × 1.75 = 15.75

6 600 animal-days

600 ÷ 40 = 15 days

7 ***y* is directly proportional to *x*.**

8 36 builder-days; 12 done

24 ÷ 6 = 4

7 days

Mr&Mrs MATHS