



Name _____
Date _____

GCSE Mathematics

F/H

Direct Proportion

Grades 4-6

Total Marks	Time	Questions
56	56 min	20

Instructions:

- Do not use a calculator when you see: 
- Answer all questions in the spaces provided.
- Show all your working - marks are awarded for method as well as final answers.
- Cross through any work you do not want to be marked.
- Check your answers if you have time at the end.

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Edexcel-style questions**Q1**

Grade 4

Edexcel style

8 pens cost £4.80. Find the cost of 5 pens.

Answer

teachably

[2 marks]**Q2**

Grade 4

Edexcel style

A recipe for 4 people needs 300 g of flour. How much flour is needed for 10 people?

Answer

teachably

[2 marks]**Q3**

Grade 5

Edexcel style

If £1 = \$1.35, convert \$54 to pounds.

Answer

teachably

[3 marks]

Q4

Grade 6

Edexcel style

y is directly proportional to x. When $x = 5$, $y = 20$. Find the value of y when $x = 8$.

Answer _____

teachably

[3 marks]**Q5**

Grade 6

Edexcel style

The cost, C, of hiring a bouncy castle is directly proportional to the number of hours, h, it is hired for. It costs £45 to hire for 3 hours. Find the cost of hiring it for 7 hours.

Answer _____

teachably

[4 marks]

AQA-style questions**Q6**

Grade 4

AQA style

6 books cost £27. Find the cost of 4 books.

Answer

teachably

[2 marks]**Q7**

Grade 4

AQA style

A recipe for 6 people needs 240 g of sugar. How much sugar is needed for 9 people?

Answer

teachably

[2 marks]**Q8**

Grade 5

AQA style

9 metres of ribbon costs £15.75. Find the cost of 12 metres.

Answer

teachably

[3 marks]

Q9

Grade 6

AQA style

y is directly proportional to x . When $x = 6$, $y = 15$. Find the value of y when $x = 10$.

Answer

teachably

[3 marks]**Q10**

Grade 6

AQA style

The distance, d , a spring stretches is directly proportional to the mass, m , attached to it. A mass of 4 kg stretches the spring by 10 cm. Find the extension when a mass of 6.5 kg is attached.

Answer

teachably

[4 marks]

OCR-style questions**Q11**

Grade 4

OCR style

5 kg of apples cost £6.25. Find the cost of 8 kg of apples.

Answer

teachably

[2 marks]**Q12**

Grade 4

OCR style

A recipe for 5 people needs 750 ml of milk. How much milk is needed for 8 people?

Answer

teachably

[2 marks]**Q13**

Grade 5

OCR style

A car travels 165 miles using 15 litres of petrol. How far can it travel using 22 litres?

Answer

teachably

[3 marks]

Q14

Grade 6

OCR style

p is directly proportional to q . When $q = 8$, $p = 20$. Find the value of p when $q = 14$.

Answer _____

teachably

[3 marks]

Q15

Grade 6

OCR style

The cost, C , of a taxi journey is directly proportional to the distance, d , travelled. A journey of 12 miles costs £21. Find the cost of a journey of 20 miles.

Answer _____

teachably

[4 marks]

Teachably-style questions**Q16**

Grade 4

Teachably style

12 tickets cost £54. Find the cost of 7 tickets.

Answer

teachably

[2 marks]**Q17**

Grade 4

Teachably style

A recipe for 3 people needs 180 g of butter. How much butter is needed for 7 people?

Answer

teachably

[2 marks]**Q18**

Grade 5

Teachably style

15 identical books weigh 4.5 kg. Find the weight of 22 books.

Answer

teachably

[3 marks]

Q19

Grade 6

Teachably style

y is directly proportional to x. When $x = 4$, $y = 30$. Find the value of x when $y = 45$.

Answer _____

teachably

[3 marks]

Q20

Grade 6

Teachably style

The energy, E, produced by a solar panel is directly proportional to the time, t, it is exposed to sunlight. In 5 hours it produces 12.5 kWh. Find how long it takes to produce 30 kWh.

Answer _____

teachably

[4 marks]

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