3.5 Direct Proportion and the Unitary Method: 30-minute Pack

Calculators not allowed · about 30 minutes

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 Ria earns £359.60 for 29 hours of work. Work out her hourly rate of pay.

(2)

2 A shop sells pasta in two sizes. Pack A is 250 g for £0.86. Pack B is 1000 g for £1.34. Which pack is better value? You must show your working.

(3)

3 A recipe for 4 people uses 175 g of butter and 250 g of sugar. Work out how much of each ingredient is needed for 2 people.

(3)

4 A shop sells cereal in two sizes. Pack A is 300 g for £2.75. Pack B is 600 g for £1.27. Which pack is better value? You must show your working.

(3)

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5 One of a type of ticket costs £5.14. Work out the cost of 6 of them.

(1)

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6 y is directly proportional to x. When x = 6, y = 48. Work out the value of y when x = 16.

(2)

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7 A shop sells bottles of water at a constant price each. 18 bottles of water cost £71.28. How many bottles of water can be bought for £570.24?

(3)

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8 £1 = 1.2 dollars. Convert £50 to dollars.

(2)

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9 Omar buys 5 apples for £2.50. What is the unit price for one apple?

(2)

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10 A recipe for 6 people uses 900 ml of stock. Find the amount of stock needed for 10 people.

(2)

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11 8 identical books cost £32 together. Find the cost of 1 book.

(1)

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Mark scheme · 3.5 Direct Proportion and the Unitary Method: 30-minute Pack

Question 1

£359.60 ÷ 29	M1
£12.40 cao	A1

Answer: **£12.40**

Question 2

price per gram or grams per penny for one pack	M1
same measure for the other pack (or both scaled to a common weight)	M1
Pack B, with a correct comparison	A1

Answer: **Pack B**

Question 3

scale factor 2/4 or amount for 1 person	M1
87.5 g of butter	A1
125 g of sugar	A1

Answer: **87.5 g of butter, 125 g of sugar**

Question 4

price per gram or grams per penny for one pack	M1
same measure for the other pack (or both scaled to a common weight)	M1
Pack B, with a correct comparison	A1

Answer: **Pack B**

Question 5

£30.84 cao	B1

Answer: **£30.84**

Question 6

y = kx with k = 48 ÷ 6 = 8	M1
128 cao	A1

Answer: **128**

Question 7

£71.28 ÷ 18 = £3.96	M1
£570.24 ÷ £3.96	M1
144 cao	A1

Answer: **144**

Question 8

50 x 1.2	M1
$60 cao	A1

Answer: **$60**

Question 9

Divide 2.50 by 5 or 250p/5 shown	M1
£0.50 cao	A1

Answer: **£0.50**

Question 10

stock per person = 900/6 = 150	M1
1500 ml cao	A1

Answer: **1500 ml**

Question 11

£4 cao	B1

Answer: **£4**

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