

Oxford Revise | Edexcel GCSE Maths Foundation | Answers

Chapter 16 Proportion

Question	Answer	Extra information	Marks
16.1	$\frac{32}{40} \times 100\% = 80\%$	$\frac{32}{40} \times 100\%$ Correct answer	1 1
16.2	$\frac{105}{135} = \frac{21}{27} = \frac{7}{9}$	$\frac{105}{135}$ Correct answer	1 1
16.3 (a)	3.5 pints	Allow 3.3 to 3.7	1
16.3 (b)	2.3 litres		1
16.4 (a)	Missing values from table are 0 and 1.5	0 1.5	1 1
16.4 (b)	$y = 1.5x$ or $y = \frac{3}{2}x$		1
16.5	Dogs Love Bach: $\pounds 12.99 \div 9 = \pounds 1.44$ per kg (nearest pence) Woof and Ready: $\pounds 11.00 \div 8 = \pounds 1.38$ per kg (nearest pence). This is the better offer.	At least one of dividing costs by 9 or 8 $\pounds 1.44$ or $\pounds 1.38$ Comparison and correct conclusion	1 1 1
16.6	Graph B		1

Question	Answer	Extra information	Marks
16.7 (a)	$12 \times 6 = 18 \times \text{time}$, so $\text{time} = 72 \div 18 = 4$ days	$12 \times 6 \div 18$ or equivalent Correct answer	1 1
16.7 (b)	$12 \times 6 = \text{builders} \times 3$ days, so $\text{builders} = 72 \div 3 = 24$ builders	$12 \times 6 \div 3$ or equivalent Correct answer	1 1
16.8 (a)	$3 \times 30 = 4 \times \text{time}$, so $\text{time} = 90 \div 4 = 22.5$ hours	$3 \times 30 \div 4$ or equivalent Correct answer	1 1
16.8 (b)	$90 \div 10 = 9$ taps	$3 \times 30 \div 10$ or equivalent Correct answer	1 1
16.9 (a)	$y = \frac{6}{x}$		1
16.9 (b)	$y = \frac{6}{4} = 1.5$		1
16.9 (c)	$x = \frac{6}{1} = 6$		1
16.10	$\text{£}1 = \text{\$}1.31$, so in the UK the T-shirt sells for the equivalent of $24 \times 1.31 = \text{\$}31.44$ The T-shirt is a little cheaper in the US	Convert $\text{£}24$ to US\$ or $\text{\$}30$ to UK£ Comparison and correct conclusion	1 1

Question	Answer	Extra information	Marks
16.11	<p>Protractors: $4 \times (\text{buy 5 and get the 6th one free})$ $= 24$ protractors for the price of 20. She must pay for 21 protractors for a cost of $21 \times 0.12 = \text{£}2.52$</p> <p>Sticky tape: $2 \times (\text{buy 10 rolls for £2}) + 5 @ 24\text{p per roll.}$ She spends $\text{£}4 + 5 \times 0.24 = \text{£}5.20$</p> <p>Pencil sharpeners $12 \times (\text{buy 1 and get 2nd at half price})$ $= 24$ sharpeners. So, she must pay $13 \times 18\text{p} + 12 \times 9\text{p} = \text{£}3.42$ Total cost $= 2.52 + 5.20 + 3.42 = \text{£}11.14$</p>	<p>Any correct strategy to buy 25 protractors (£2.52) or 25 rolls of sticky tape (£5.20) or 25 pencil sharpeners (£3.42)</p> <p>Two correct strategies</p> <p>Adding the three amounts</p> <p>Correct final answer</p>	<p>1</p> <p>1</p> <p>1</p> <p>1</p>
16.12 (a)	$\frac{5}{4} = 1.25 = 125\%$		1
16.12 (b)	$0.72 = \frac{72}{100} = \frac{18}{25}$		1
16.12 (c)	$0.7\% = 0.007$		1

Question	Answer	Extra information	Marks
16.13 (a)	In a Fibonacci sequence, each term is the sum of the previous two terms. Next two terms are: 11 (= 4 + 7) 18 (= 7 + 11)	Both must be correct	1
16.13 (b)	The difference between the first and third terms is -4 , so the difference between adjacent terms in the sequence is -2 . The sequence starts: 7, 5, 3, 1, ... The 4th term is 1	Constant difference = -2 Correct answer	1 1