

# Topic Test 1 Mark Scheme

## Ratio and Proportion - Foundation

Q	Answer	Mark	Comments
1(a)	$\frac{1}{5.5}$ or 2 : 9	M1	
	$\frac{2}{11}$	A1	oe fraction using integers
1(b)	<b>Alternative method 1</b>		
	$150 \times (1 + 4.5)$	M1	oe
	825	A1	
	<b>Alternative method 2</b>		
	150 ÷ their $\frac{2}{11}$ or 150 ÷ their $\frac{1}{5.5}$	M1	where fraction in (a) has a numerator >1  where fraction in (a) has a numerator of 1
	825	A1ft	ft their (a)

Q	Answer	Mark	Comments
2	<b>Alternative method 1</b>		
	$2^2 : 7^2$ or $4 : 49$	M1	
	$36 \div 4 \times 49$ or 441	M1	oe eg $4 : 49$ , $12 : 147$ , $36 : 441$
	21 and $-21$	A1	Either answer scores M1M1A0
	<b>Alternative method 2</b>		
	$(\sqrt{36} =) 6$ or $-6$	M1	Accept either answer
	$6 \div 2 \times 7$ or 21 or $-6 \div 2 \times 7$ or $-21$	M1	oe eg $2 : 7$ , $4 : 14$ , $6 : 21$
21 and $-21$	A1	Either answer scores M1M1A0	
3	$192 \div 4$ or 48	M1	
	their $48 \times 3$ or $192 - \text{their } 48$ or 144	M1dep	$192 \div 4 \times 3$ scores M2
	their $144 \div (1 + 8)$ or 16 (green)	M1dep	oe eg $1 : 8$ , $2 : 16$ , $4 : 32$ , $8 : 64$ , $16 : 128$
	128	A1	
4(a)	$y = \frac{x}{5}$	B1	
4(b)	$5 + 1 : 5 - 1$	M1	
	$6 : 4 (= 3 : 2)$	A1	

Q	Answer	Mark	Comments
5	<b>Alternative method 1</b>		
	$630 \div 100 \times 125$ or 787.5	M1	oe Works out calories in 90 nuts
	their $787.5 \div 90$	M1dep	
	8.75	A1	oe Accept 9 with working
	<b>Alternative method 2</b>		
	$90 \div 125 \times 100$ or 72	M1	oe Nuts per 100 g
	$630 \div$ their 72	M1dep	
	8.75	A1	oe Accept 9 with working
6	2 parts $\rightarrow$ 90	M1	oe
	$90 \div 2 \times 3$ or $90 \div 2 + 90$	M1	oe eg 45 : 135
	135	A1	