

RATIO-SET-1

1	<p>The ratios of teachers : male students : female students in a school are 2 : 17 : 18. The total number of students is 665. Find the number of teachers.</p> <p style="text-align: right;"><i>Answer</i> [2]</p>			
MS-1	38	2	M1 for $665/(17 + 18)$ s.o.i. by equivalent complete method	2
2	<p>A company makes two models of television. Model <i>A</i> has a rectangular screen that measures 44 cm by 32 cm. Model <i>B</i> has a larger screen with these measurements increased in the ratio 5:4.</p> <p>(a) Work out the measurements of the larger screen.</p> <p style="text-align: right;"><i>Answer(a)</i> cm by cm [2]</p> <p>(b) Find the fraction $\frac{\text{model } A \text{ screen area}}{\text{model } B \text{ screen area}}$ in its simplest form.</p> <p style="text-align: right;"><i>Answer(b)</i> [1]</p>			
MS-2	(a) 55, 40	2	B1 B1	
	(b) $\frac{16}{25}$	1		

3	<p>Two similar vases have heights which are in the ratio 3 : 2.</p> <p>(a) The volume of the larger vase is 1080 cm^3. Calculate the volume of the smaller vase.</p> <p style="text-align: right;"><i>Answer(a)</i> cm^3 [2]</p> <p>(b) The surface area of the smaller vase is 252 cm^2. Calculate the surface area of the larger vase.</p> <p style="text-align: right;"><i>Answer(b)</i> cm^2 [2]</p>		
MS-3	<p>(a) 320</p> <p>(b) 567</p>	<p>2</p> <p>2</p>	<p>M1 $1080 \times 8/27$ or $(2/3)^3$ or $1080 \div 27/8$ or $(3/2)^3$</p> <p>M1 $252 \times 9/4$ or $(3/2)^2$ or $252 \div 4/9$ or $(2/3)^2$</p>
4	<p>Pedro and Eva do their homework. Pedro takes 84 minutes to do his homework.</p> <p>The ratio Pedro's time : Eva's time = 7 : 6.</p> <p>Work out the number of minutes Eva takes to do her homework.</p> <p style="text-align: right;"><i>Answer</i> min [2]</p>		
MS-4	72	2	M1 for $84 \div 7$

5	<p>Ahmed and Babar share 240 g of sweets in the ratio 7 : 3.</p> <p>Calculate the amount Ahmed receives.</p> <p style="text-align: right;"><i>Answer</i> g [2]</p>		
MS-5	168	2	M1 for $240 \div (7 + 3)$ or better
6	<p>Martha divides \$240 between spending and saving in the ratio</p> <p style="text-align: center;">spending : saving = 7 : 8.</p> <p>Calculate the amount Martha has for spending.</p> <p style="text-align: right;"><i>Answer</i> \$ [2]</p>		
MS-6	112	2	M1 for $240 \div (7 + 8) \times 7$
7	<p>Pip and Ali share \$785 in the ratio Pip : Ali = 4 : 1.</p> <p>Work out Pip's share.</p> <p style="text-align: right;"><i>Answer</i> \$ [2]</p>		
MS-7	628	2	M1 for $\frac{785}{1+4} [\times 4]$

8	<p>Ralf and Susie share \$57 in the ratio 2 : 1.</p> <p>(a) Calculate the amount Ralf receives.</p> <p style="text-align: right;">\$ [2]</p> <p>(b) Ralf gives \$2 to Susie.</p> <p>Calculate the new ratio Ralf's money : Susie's money. Give your answer in its simplest form.</p> <p style="text-align: right;">..... : [2]</p>			
MS-8	(a)	38	2	M1 for $57 \div (2 + 1)$ or better
	(b)	12 : 7	2	M1FT for <i>their</i> $38 - 2$ and <i>their</i> $19 + 2$ seen dep on sum = 57 If M0 SC1 for answer 7 : 12