

Combining Ratio

November 2022 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
24 (a)(i)	2 : 6 : 5	P1	for process to compare ratios, eg $a : b = 2 : 6$ or $b : c = 3 : 2.5$	Could use 3 or any common multiple of 3 and 6
		A1	for 2 : 6 : 5 oe	
(ii)	$\frac{2}{13}$	M1	for process to find fraction, eg $\frac{[2]}{[2+6+5]}$ or for $\frac{a}{a+b+c}$	
(b)	1 : 10	P1	for process to express all numbers in terms of one number, eg $p = 5 \times 2m (= 10m)$ or $m = \frac{n}{2}$ or for $2m = \frac{p}{5}$ or for assigning values in the ratio given, eg $m = 1, n = 2, p = 10$ or for $n : m : p = 2 : 1 : 10$ oe or 10 : 1 oe	
		A1	for 1 : 10 oe	

June 2024 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
26	7.5	P1	for process to find the number of empty jars eg $3 \div 8 \times 400$ oe (= 150)	
		P1	for start of process to deal with ratios eg 3 : 4 and 4 : 8 or 3 : 4 : 8 oe	
		P1	for process to find the number of empty small jars eg $\frac{3}{3+4+8} \times "150"$ oe (= 30) or 30 : 40 : 80	
		P1	for process to find percentage, eg $\frac{"30"}{400} \times 100$ oe or $\frac{"7.5"}{100}$	
		A1	for 7.5 or $7\frac{1}{2}$ oe	
			OR	
		P1	for start of process to deal with ratios eg 3 : 4 and 4 : 8 or 3 : 4 : 8 oe	
		P1	for process to find the proportion of the empty jars that are small eg $\frac{3}{3+4+8} (= \frac{1}{5})$	
		P1	for process to find the proportion of Kasim's jars that are empty small jars eg $\frac{3}{8} \times \frac{1}{5} (= \frac{3}{40})$	
		P1	for process to find percentage, eg $\frac{3}{40} \times 100$ oe or $\frac{"7.5"}{100}$	
		A1	for 7.5 or $7\frac{1}{2}$ oe	

June 2020 Paper 1

Question	Answer	Mark	Mark scheme	Additional guidance
29	6 : 15 : 20	<p>P1</p> <p>P1</p> <p>A1</p>	<p>chooses a multiplier to equate the two fractions in terms of b eg $\frac{2}{5} \times \frac{3}{3} (= \frac{6}{15})$ or $\frac{3}{4} \times \frac{5}{5} (= \frac{15}{20})$</p> <p>or lists equivalent fractions to $\frac{2}{5}$ up to at least $\frac{6}{15}$, eg. $\frac{2}{5}, \frac{4}{10}, \frac{6}{15}, \dots$</p> <p>or lists equivalent fractions to $\frac{3}{4}$ up to at least $\frac{15}{20}$, eg. $\frac{3}{4}, \frac{6}{8}, \frac{9}{12}, \frac{12}{16}, \frac{15}{20}, \dots$</p> <p>or ($a : b =$) 2 : 5 and ($b : c =$) 3 : 4</p> <p>or for 6 : 15 or 15 : 20 seen</p> <p>puts into related terms ready for ratio eg $\frac{2}{5} \times \frac{3}{3} = \frac{6}{15}$ and $\frac{3}{4} \times \frac{5}{5} = \frac{15}{20}$</p> <p>or for ($a : b =$) 6 : 15 and ($b : c =$) 15 : 20</p> <p>or lists equivalent ratios up to a common element for b, eg $a : b = 2 : 5, 4 : 10, 6 : \underline{15}$ and $b : c = 3 : 4, 6 : 8, 9 : 12, 12 : 16, \underline{15} : 20$</p> <p>for 6 : 15 : 20 oe</p>	<p>Need not be written in ratio form</p> <p>Accept equivalent ratios Accept $a = 6$. $b = 15$ and $c = 20$</p>