

1	(a)	$\frac{95}{28}$	M1	for a method to add using common denominators with at least one fraction correct (matching numerator with common denominator) eg $\frac{60}{28} + \frac{35}{28}$ or $(2)\frac{4}{28} + (1)\frac{7}{28}$	Use of decimals gets no credit unless it leads to a correct fraction
			A1	$\frac{95}{28}$ oe eg $3\frac{11}{28}$	
	(b)	$1\frac{3}{5}$	M1	for $\frac{6}{5} \times \frac{4}{3}$ or $\frac{24}{20} + \frac{15}{20}$ or $\frac{8}{5}$ oe eg $1\frac{9}{15}$	Use of decimals gets no credit unless it leads to a correct fraction
			A1	cao	

2	$5\frac{3}{5}$	M1	for writing as improper fractions with at least one correct, eg $\frac{7}{2} \times \frac{8}{5}$ oe	
		M1	(dep) for multiplying improper fractions. eg "56" or $5\frac{6}{10}$ or $\frac{28}{5}$ oe	
		A1	cao	

3	$\frac{4}{9}$	P1	for process to find link between volume of Q and volume of P or between volume of R and volume of Q. eg ratio 1.5 : 1 or Q = 1.5P or $P = \frac{2}{3}Q$ or two values in the ratio 1 : 1.5 such as 100 and 150	1.5 <sup>2</sup> ( $=\frac{9}{4}$ ) is enough for this mark, award P1P1 Accept $P = \frac{4}{9}R$
		P1	for process to find link between volume of R and volume of P eg 1.5 <sup>2</sup> : 1 or two values in the ratio 1 : 2.25 such as 100 and 225	
		A1	for $\frac{4}{9}$ oe fraction eg $\frac{100}{225}$	

4	$2\frac{1}{3}$	M1	for either $\frac{7}{4}$ oe or $\frac{4}{3}$ oe	
		M1	for method to find the product. eg $\frac{7 \times 4}{4 \times 3}$ or $\frac{21 \times 16}{12 \times 12}$ oe or for $\frac{28}{12}$ or $\frac{7}{3}$ oe	
		A1	for $2\frac{1}{3}$ or an equivalent mixed number	

5	$1 + \frac{\sqrt{5}}{5}$	P1	for writing $\sqrt{180}$ as $6\sqrt{5}$	This process mark can be awarded whenever this is seen, which might be later in the process.  Accept written as $a = 1, b = 5$
		P1	for process to rationalising the denominator eg $\frac{\sqrt{180} - 2\sqrt{5}}{5\sqrt{5} - 5} \times \frac{5\sqrt{5} + 5}{5\sqrt{5} + 5}$ or $\frac{4\sqrt{5}}{5\sqrt{5} - 5} \times \frac{5\sqrt{5} + 5}{5\sqrt{5} + 5}$ oe	
		P1	(dep on previous P1) for expanding terms eg $\frac{5\sqrt{5}\sqrt{180} + 5\sqrt{180} - 50 - 10\sqrt{5}}{125 - 25}$ or $\frac{100 + 20\sqrt{5}}{100}$ oe	
		A1	for $1 + \frac{\sqrt{5}}{5}$	

6	$1\frac{8}{15}$	M2  (M1)  A1	<p>for a complete method, eg <math>4 - 2 + \frac{3}{15} - \frac{10}{15}</math> condoning error with one numerator or for <math>\frac{21}{5} - \frac{8}{3} = \frac{63}{15} - \frac{40}{15} (= \frac{23}{15})</math> with no more than one error</p> <p>for finding two fractions with a correct common denominator, with at least one correct corresponding numerator, eg <math>\frac{3}{15}, \frac{10}{15}</math> or for converting both to improper fractions, eg <math>(\frac{21}{5}, \frac{8}{3})</math></p> <p><math>1\frac{8}{15}</math> oe</p>	<p>At least one improper fraction must be correct</p> <p>Any equivalents must be a mixed number</p>
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