A1	Answers to the Non-Calculator Paper	
1	Mark 1 common denominator Mark 2 answer	$2\frac{1}{3} + \frac{5}{6} = 2\frac{2}{6} + \frac{5}{6}$ $3\frac{1}{6}$ **or** $\frac{19}{6}$	
2	Mark 1 evidence of any 3 correct terms Mark 2 all 6 terms correct Mark 3 collect like terms	$x^3 - 5x^2 + 3x$ *or* $-4x^2 + 20x - 12$ $x^3 - 5x^2 + 3x - 4x^2 + 20x - 12$ $\boldsymbol{x^3 - 9x^2 + 23x - 12}$	
3	Mark 1 substitute into the function Mark 2 answer	$(-2)^2 - 5$ $4 - 5 = \boldsymbol{-1}$	
4	Mark 1 correct bracket with square Mark 2 completed square	$(x - 5)^2$ $\boldsymbol{(x - 5)^2 + 7}$	
5	Mark 1 show scaling for the simultaneous equations $\quad\quad 12x + 15y = 57 \quad$ or $\quad 8x + 10y = 38$ $\quad\quad 12x - 8y = -12 \quad\quad\quad 15x - 10y = -15$ Mark 2 follow a valid strategy to find values for y and for x $\quad\quad\quad 23y = 69, \quad y = 3$ $\quad\quad or\ 23x = 23, \quad x = 1,$ Mark 3 Both values correct for this simultaneous equation $\quad\quad \boldsymbol{x = 1, y = 3}$		
6	Mark 1 triangle EOB is an isosceles triangle $\quad\quad \angle EBO = BEO = 42°$ Mark 2 angle OBC is 90°, the obtuse angle EBC is $\quad\quad \angle EBC = 90° + 42° = 132°$ Mark 3 use triangle EBC to find the shaded angle $\quad\quad \angle ECB = 180° - 42° - 132° = \boldsymbol{6°}$ Other methods can be used to identify the shaded angle. Angles must either be marked on the diagram or clearly stated in the answer i.e. $\angle OBC$ is 90°		
7	Mark 1 use laws of indices Mark 2 answer	$r^{-3} = \frac{1}{r^3}$ $\frac{1}{5r^{-3}} = \frac{r^3}{5}$	
8	Mark 1 correct substitution into formula for a cone Mark 2 answer	$V = \frac{1}{3} \times 3.14 \times 3^2 \times 10$ $\boldsymbol{94.2 (cm^3)}$	
	$\frac{1}{3} \times 90 \times 3.14 \quad \rightarrow \quad 30 \times 3.14 \quad \rightarrow \quad 3 \times 31.4 = 94.2$		
9	Mark 1 simplify $\sqrt{20}$ Mark 2 simplify $\sqrt{125}$ Mark 3 collect like terms	$\sqrt{20} = \sqrt{4}\sqrt{5} = 2\sqrt{5}$ $\sqrt{125} = \sqrt{25}\sqrt{5} = 5\sqrt{5}$ $2\sqrt{5} + 5\sqrt{5} - \sqrt{5} = \boldsymbol{6\sqrt{5}}$	
9	Mark 1 &2 state correct coordinate Mark 3 state correct coordinate Mark 4 state equation of axis of symmetry One mark can be given in part (i) for $A\ (0, -5)\ or\ A\ (5,0)$	$\boldsymbol{A\ (-5, 0)}$ $\boldsymbol{B\ (0, 25)}$ $\boldsymbol{x = -5}$	