Section B

8	(a)	$\sqrt{\frac{360B}{\pi h}}$	3	M2	$(r^2 =)\ \frac{360B}{\pi h}$
				M1	$\pi h r^2 = 360B$ or $\frac{r^2}{360} = \frac{B}{\pi h}$ or correct 2nd step following incorrect 1st step
	(b)	$x^2 - 3x - 10$	2	M1	Any two terms correct: $x^2 - 5x + 2x - 10$
			5		

9	(a)	No with a complete justification	3	M2	$1{\cdot}3 \times 0{\cdot}7$ or $0{\cdot}91$ or calculation showing result of 30% inc followed by 30% decrease
				M1	$1{\cdot}3$ or $0{\cdot}7$ seen, o.e., or worded statement showing good understanding but without calculations
	(b)	(i) All entries correct	2	M1	Hi-fi = $0{\cdot}05$ or normal screen = $0{\cdot}25$ (all)
		(ii) $0{\cdot}0125$ o.e. f.t. (i)	2	M1	f.t. their "$0{\cdot}05 \times 0{\cdot}25$"
	(c)	$86{\cdot}5$	1		Accept $86{\cdot}4\dot{9}$ or $86{\cdot}4999$ or $86{\cdot}49\ldots$
		$85{\cdot}5$	1		
			9		

10	(a)	$h = 0{\cdot}963$ with correct justification		M2	$(h^2 =)\ 1{\cdot}5^2 - 1{\cdot}15^2$ or $0{\cdot}9275$
				M1	Attempted use of $1{\cdot}15$ with Pythagoras
			3	A1	$(h =)\ \sqrt{1{\cdot}5^2 - 1{\cdot}15^2} = 0{\cdot}963$ or $\sqrt{0{\cdot}9275} = 0{\cdot}963$
		If trig used			M1 for $\sin(\ldots) = \frac{1{\cdot}15}{1{\cdot}5}$ o.e. with cos or tan
					M1 for $(h =) = 1{\cdot}5 \times \cos$(their answer) o.e.
					A1 $h = 0{\cdot}963$
	(b)	Incorrect, only $22{\cdot}6$ - $22{\cdot}7$, 23	4	M1	Area of rectangle = $5{\cdot}98$ or area of $\Delta = 1{\cdot}10(745)$ or $1{\cdot}1$
				M1	X-section: $(2{\cdot}6 \times 2{\cdot}3) + 0{\cdot}5(2{\cdot}3 \times 0{\cdot}963)$ or volume of cuboid = $19{\cdot}136$ or volume of Δ'r prism = $3{\cdot}52$ to $3{\cdot}54(384)$
				M1	Attempt at volume: their X-section $\times 3{\cdot}2$ or volume of Δ'r prism added to cuboid
	(c)	$98{\cdot}9(..)$, 99, $100 - 100{\cdot}2$	4	M2	$\sin^{-1}\left(\frac{1{\cdot}15}{1{\cdot}5}\right)$ **or** $\cos^{-1}\left(\frac{1{\cdot}15}{1{\cdot}5}\right)$ and $\angle$ identified
				M1	$\sin(\ldots) = \frac{1{\cdot}15}{1{\cdot}5}$ **or** $\cos(\ldots) = \frac{1{\cdot}15}{1{\cdot}5}$
				A1	A1 $49{\cdot}46$ or $49{\cdot}5$ or $50 - 50{\cdot}1$ **or** $39{\cdot}9 - 40{\cdot}0$ or $40{\cdot}5(3)$
			11		
			25		