20	$(V=)\pi x^2\left(\frac{800}{\pi x}-x\right)$ or $800x-\pi x^3$ oe		5	M1 for volume of cylinder (in terms of one variable, e.g. x or r)
	$\left(\frac{\mathrm{d}V}{\mathrm{d}x}=\right)800-3\pi x^2$			M1ft for differentiating an expression in one variable to find 800 **or** $\pm 3\pi x^2$ (must come from a cubic in the form $800x\pm\pi x^3$ or $800x\pm ax^3$ or $bx\pm\pi x^3$ where $a\neq 0$ and $b\neq 0$)
	"$800-3\pi x^2$" $=0$			M1ft dep on previous M1 for equating their $\frac{\mathrm{d}V}{\mathrm{d}x}$ to zero (must be a quadratic in the form $800\pm ax^2$ or $b\pm 3\pi x^2$ where $a\neq 0$ and $b\neq 0$)
	$(x=)\sqrt{\frac{800}{3\pi}}\left(=\sqrt{84.8(8263...)}\right)$ or $\frac{\sqrt{9600\pi}}{6\pi}$ or 9.2(13177…)			A1 for a correct value of x Allow use of quadratic formula
	Award marks within the range from correct working	4914		A1 accept 4910 – 4914
				Total 5 marks