Question		Working	Answer	Mark	Notes
21		$x(3x)(13.5-2x)$ **or** $3x^2(13.5-2x)$ **or** $x(40.5x-6x^2)$ **or** $3x(13.5x-2x^2)$ **or** $40.5x^2-6x^3$		5	M1 for an expression for the volume of the cuboid
		$\left(\frac{dV}{dx}=\right)81x-18x^2$			M1 ft for differentiating an expression to find $81x$ or $\pm 18x^2$ (must come from a cubic in the form $40.5x^2 \pm ax^3$ or $bx^2 \pm 6x^3$ where $a \neq 0$ and $b \neq 0$)
		$81x-18x^2=0$ oe			M1 ft dep on previous M1 for equating their $\frac{dV}{dx}$ to zero
		$(x=)$ 4.5			A1 oe dep on M2 for a correct value of x
		Working required	273.375		A1 oe eg $\frac{2187}{8}$ dep on M2 accept 273 − 273.4 Both A marks can be awarded for 273.375 if 4.5 is not seen provided M2 has been awarded
					Total 5 marks