26	$\left(\frac{1}{3}\times\pi\times x^2\times 5x\right)+\left(\frac{1}{2}\times\frac{4}{3}\times\pi\times x^3\right)=504\pi$ oe or $\frac{7}{3}\times\pi\times x^3=504\pi$ oe		6	M1 for an equation for the volume of the cone and hemisphere Allow 3.14… or $\frac{22}{7}$ for π
	$(x^3=)$ 216 or $(x=)$ 6			A1 dep on M1 for a correct value of x^3 or x
	$\frac{1}{2}\times\frac{4}{3}\times\pi\times 6^3\left(=144\pi=452...\right)$ oe or $\frac{1}{3}\times\pi\times 6^2\times(5\times 6)\left(=360\pi=1130...\right)$ oe			M1 dep on M1 and correct figures for a **correct** method to find the volume of the hemisphere (awrt 452 or awrt 453) or for a **correct** method to find the volume of the cone (awrt 1130 or awrt 1131)
	$9\times\left(504\pi-144\pi\right)\left(=3240\pi=10\,178...\right)$ oe or $9\times 360\pi\left(=3240\pi=10\,178...\right)$ oe			M1 dep on previous M1 and correct figures for a **correct** method to find the mass of the cone Allow in the range 10 173 – 10 183
	$\frac{4752\pi-3240\pi}{144\pi}$ oe or $\frac{1512\pi}{144\pi}$ oe or $\frac{4750....}{452.....}$			M1 dep on previous M1 and correct figures for a **correct** method to find the density of the hemisphere
	Working required	10.5		A1 oe dep on M4 Allow in the range 10.47 – 10.54
				Total 6 marks