18 (a)	$F = \frac{k}{r^3}$ **or** $Fr^3 = k$ **or** $kF = \frac{1}{r^3}$		3	M1	oe k can be any letter (must be a letter and not 1)
	$6 = \frac{k}{2^3}$ oe **or** $k = 48$ **or** $6k = \frac{1}{2^3}$ oe **or** $k = \frac{1}{48}$			M1	For substitution of F and r into a correct formula, implies the first M1 if you see this stage Condone use of $\propto$ for method marks
	Correct answer scores full marks (unless from obvious incorrect working)	$F = \frac{48}{r^3}$		A1	oe with F the subject eg $F = 48 \times \frac{1}{r^3}$ or $F = 48 \times r^{-3}$ Award 3 marks if answer is $F = \frac{k}{r^3}$ and k = 48 clearly given in the body of the script M2A0 for $Fr^3 = 48$ or $r = \sqrt[3]{\frac{48}{F}}$ or $r^3 = \frac{48}{F}$
(b)	$(r^3 =) \frac{"48"}{3072}$ oe eg $\frac{1}{64}$ **or** (0.01(5625)) rounded or truncated		2	M1ft	allow use of their "48" as long as M2 gained in (a)
	Correct answer scores full marks (unless from obvious incorrect working)	$\frac{1}{4}$		A1	oe
					Total 5 marks