

Question	Answer	Mark	Mark scheme	Additional guidance
13	7	P1	for setting up an equation using volumes, eg $(x + 2)(2x - 1)(x - 1) = 2x(x + 3)(x - 3) + 142$	May occur later in the process Must use expressions for volumes but these may have been incorrectly expanded and simplified
		P1	for process to find an expanded expression for the area of one face, eg $(x + 2)(2x - 1) = 2x^2 - x + 4x - 2$ or $2x^2 + 3x - 2$ or $(x + 2)(x - 1) = x^2 - x + 2x - 2$ or $x^2 + x - 2$ or $(2x - 1)(x - 1) = 2x^2 - 2x - x + 1$ or $2x^2 - 3x + 1$ or $2x(x + 3) = 2x^2 + 6x$ or $2x(x - 3) = 2x^2 - 6x$ or $(x + 3)(x - 3) = x^2 - 3x + 3x - 9$ or $x^2 - 9$	Condone one incorrect term in expansion of two brackets
		P1	for a complete process to find a fully expanded expression for the volume of one cuboid, eg $2x^3 + 3x^2 - 2x - 2x^2 - 3x + 2$ or $2x^3 + x^2 - 5x + 2$ or $2x^3 + 6x^2 - 6x^2 - 18x$ or $2x^3 - 18x$	Expression need not be fully simplified, but must be correct
		P1	(dep P3) for correct rearrangement of the expanded terms in their equation leading to a 3-term quadratic eg $x^2 + 13x - 140 (= 0)$ or $x^2 + 13x = 140$	
		A1	cao	