

1	(a)	$T = \frac{k}{m^2}$ or $Tm^2 = k$		3	M1	for a correct equation with a constant Do not allow constant = 1
		$30 \times 0.5^2 = k$ or $30 = \frac{k}{0.5^2}$ or $k = 7.5$ or $k = \frac{15}{2}$			M1	dep on M1 for correct substitution in a correct equation
			$T = \frac{7.5}{m^2}$		A1	for $T = \frac{7.5}{m^2}$ or $T = \frac{15}{2m^2}$ SCB2 for $Tm^2 = 7.5$ or $Tm^2 = \frac{15}{2}$ or $m^2 = \frac{7.5}{T}$ or $m^2 = \frac{15}{2T}$
	(b)		750	1	B1	cao
Total 4 marks						

2		eg $6 \div 1.2 (= 5)$ or $1.2 \div 6 (= \frac{1}{5})$ or $\frac{2x}{1.2} = \frac{2x+9}{6}$ oe or $\frac{2x}{2x+9} = \frac{1.2}{6}$ oe		3	M1	for finding the scale factor or using a correct ratio or fraction method
		eg " 5 " $\times 2x = 2x + 9$ or $2x \times 6 = 1.2(2x+9)$ oe eg $12x = 2.4x + 10.8$ or $9.6x = 10.8$ oe			M1	for setting up an equation in x and removing denominators
			$\frac{9}{8}$		A1	oe eg 1.125 (allow 1.12 or 1.13)
Total 3 marks						

3		$7 \times 2.7 (= 18.9)$ or $4 \times 3.3 (= 13.2)$ or $\frac{3W + 4 \times 3.3}{7} = 2.7$ oe eg $3W + 13.2 = 18.9$		3	M1	For one correct product or for a correct equation for W
		$\frac{7 \times 2.7 - 4 \times 3.3}{3}$ or $\frac{"18.9" - "13.2"}{3}$ or $\frac{5.7}{3}$ or $3W = 5.7$			M1	
		If you see 1.9 from correct working and they do further work to this value, award M2	1.9		A1	

4	(b)	$(x \pm 2)$	$(x + 3.5 \pm 2) \dots$ or $\left(x + \frac{7}{2} \pm 2\right) \dots$		4	M1	for sight or use of $(x \pm 2)$ or $(x + 1.5)$ or $(x + 5.5)$
		$(x-2)^2 + 7(x-2) + 20$	$(x + 3.5 - 2)^2 - 3.5^2 + 20$ or $(x + 1.5)^2 + 7.75$			M1	for correct substitution or correct use of $(x-2)$ for x into L
		$x^2 - 4x + 4 + 7x - 14 + 20$	$x^2 + 3x + 2.25 - 12.25 + 20$ or $x^2 + 3x + 2.25 + 7.75$			M1	dep on M2 for expanding brackets correctly
		Correct answer scores full marks (unless from obvious incorrect working)	$x^2 + 3x + 10$			A1	