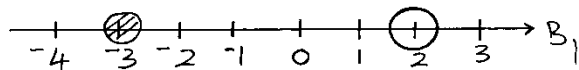


2. Quadratic equations

1	$25x^2 - 20x + k = (5x - c)^2$ $= 25x^2 - 10cx + c^2$ $- 20x = -10cz$ $c = 2$ $k = c^2 = 2^2$ $\therefore k = 4$	M_1 A_1	Comparing terms or equivalent $c = \frac{b^2}{4a}$ $k = \frac{(-20)^2}{4 \times 25}$
		2	

1. $(3x + 5)^2 + (\sqrt{611})^2 = (7x - 2)^2$
 $(9x^2 + 30x + 25) + 611 = 49x^2 + 28x + 4$
 $- 40x^2 + 2x + 632 = 0$
 $20x^2 - x = 316 = 0$
 $x = \frac{1 \pm \sqrt{2581}}{40}$
 $= \frac{160}{40} \text{ OR } x = 4$
 $\text{Area} = (\frac{1}{2} \times \sqrt{611} \times 17)$
 $= 210.1 \text{ cm}^2$

2. $7x - 4 \leq 9x + 2$ $9x + 2 < 3x + 14$
 $\frac{-6 \leq 2x}{2 \quad 2}$ $6x < 12$
 $-3 \leq x$ $x < 2$
 $\therefore -3 \leq x < 2$



Integral values are -3, -2, -1, 0 and 1