



(a). (i). $1^{\text{st}} = 2 \text{ m}$ $d = 1.5 \text{ m}$

$$\text{Last} = 32 \text{ m}$$

$$\therefore S_n = \frac{n}{2} (a + l)$$

$$= \frac{n}{2} (2 + 32)$$

$$= \frac{n}{2} \times 34$$

$$= \frac{34n}{2}$$

$$n = 17.$$

\therefore (Arlene) throw the stick 17 times.

ii). $17 \times 1.5 = 25.5$

\therefore the dog run for 25.5 m all together.

(b). $L = 38 \text{ cm}$ $\therefore \theta = \frac{L}{r}$

$$r = 20 \text{ cm} \quad = \frac{38}{20}$$

$$\theta = ? \quad = 1.9 \text{ cm}$$

(c). $y = x^2 - 8x + 4$

i).