

4)

$$a_2 = 3a_1 = 45 + 25 \quad a_3 + a_4 = 6 \quad = 55$$

$$a_1 + d = 3a_1$$

$$\frac{d}{2} = a_1$$

$$a_1 + 2d + a_1 + 3d = 6$$

$$2a_1 + 5d = 6$$

$$a_1 = \frac{6 - 5d}{2}$$

como

$$a_1 = \frac{d}{2} = \frac{6 - 5d}{2}$$

entonces

$$\frac{d}{2} = \frac{6 - 5d}{2}$$

$$d = 6 - 5d$$

$$\boxed{d = 1}$$

$$\frac{n}{2} (2a_1 + (n-1)d) = 50$$

$$n \left(2 \cdot \frac{1}{2} + (n-1) \right) = 100$$

$$n (1 + n - 1) = 100$$

$$n^2 = 100$$

$$\boxed{n = 10}$$