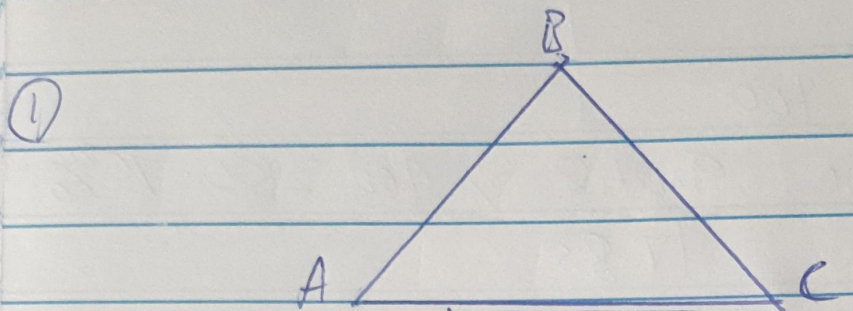


Electrical/Electronics Engineering

19/BNG004/051



$$\text{Distance AB} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

$$A = (6, -5), B(-2, 1)$$

$$|AB| = \sqrt{(-2-6)^2 + (1+5)^2}$$

$$|AB| = \sqrt{(-8)^2 + (6)^2}$$

$$|AB| = \sqrt{64 + 36}$$

$$|AB| = \sqrt{100} = 10 //$$

Distance AC

$$A = (6, -5), C = (0, 3)$$

$$|AC| = \sqrt{(0-6)^2 + (3+5)^2}$$

$$|AC| = \sqrt{36 + 64}$$

$$|AC| = \sqrt{100} = 10 //$$

$$|BC| = \sqrt{(0+2)^2 + (3-1)^2}$$

$$|BC| = \sqrt{4 + 4}$$

$$|BC| = \sqrt{8}$$

An Isosceles have only 2 of its sides equal

$$\therefore |AB| = |AC| \neq |BC| //$$

$$20) x = \frac{1x_1 + 1x_2}{L + K}$$

$$x_1 = 5, x_2 = -4$$

$$x_2 = -14$$

$$S = \frac{L(-4) + K(14)}{L + K}$$

$$S(L + K) = -4L + 14K$$

$$SL + SK = -14L + 14K$$

$$9L = 9K$$

$$\therefore L = K$$

The ratio is $1:1$

~~$$x = \frac{Ly_1 + Ky_2}{L + K}$$~~

~~$$-3L + 3K = 9K - 15K$$~~

$$x = \frac{2y_1 + 1y_2}{L + K}$$

$$y_1 = -3, y_2 = 9$$

$$y_2 = -15$$

$$-3 = 9K + (-15)K$$

$$-3L - 3K = 9K - 15K$$

$$-12L = -12K$$

$$L = K$$

Therefore the P divides Q as $1:1$

$$\textcircled{b} x = \frac{Lx_1 - Lx_2}{L-k}$$

$$x_1 = 5, x_2 = -14$$

$$x = 14$$

$$14L = \frac{L(5) - k(-14)}{L-k}$$

$$14L - 14k = 5L + 14k$$

$$9L = 28k$$

$$L = 2k$$

$$L:k = 1:2$$

$$y = \frac{Ly_1 - Ly_2}{L-k} \quad \text{if } y_1 = -3, y_2 = 9$$

$$y = -15$$

$$-15 = \frac{-3L - 9k}{L-k}$$

$$-15L - 15k = -3L + 9k$$

$$-12L = 24k$$

$$-2L = 4k$$

Therefore R divides PQ is $-2:1$