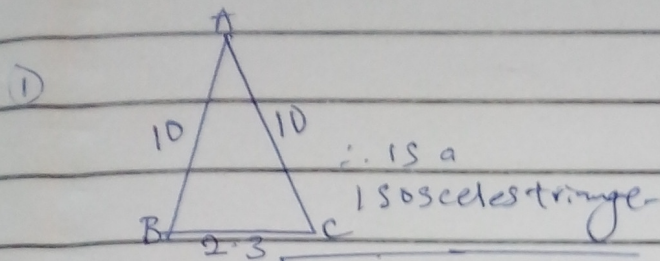


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Mod 102



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

$$x_1 = 6 \quad y_1 = -5$$

$$x_2 = -2 \quad y_2 = 1$$

$$\begin{aligned} *AB &= \sqrt{(-2-6)^2 + (1-(-5))^2} \\ &= \sqrt{(-8)^2 + (6)^2} \end{aligned}$$

$$AB = \sqrt{64 + 36} = \sqrt{100} = 10$$

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

$$x_1 = 6 \quad y_1 = -5$$

$$x_2 = 0 \quad y_2 = 5$$

$$\begin{aligned} &= \sqrt{(0-6)^2 + (5-(-5))^2} \\ &= \sqrt{(-6)^2 + (10)^2} = \sqrt{36 + 64} \end{aligned}$$

$$= \sqrt{100} = 10$$

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

$$x_1 = -2 \quad y_1 = 1 \quad = \sqrt{4 + 4} = \sqrt{8}$$

$$x_2 = 0 \quad y_2 = 3 \quad \text{Since } AB = AC$$

The triangles isosceles

P divides QR

$$(2) \text{ (a) } x = \frac{Lx_1 + Kx_2}{L+K} \quad x_1 = -4 \quad x_2 = 14$$

$$\therefore 5 = \frac{L(-4) + K(14)}{L+K}$$

$$\therefore 5(L+K) = -4L + 14K$$

$$\therefore 5(L+K) = -4L + 14K$$

$$\therefore 5L + 5K = -4L + 14K$$

C.L.T

$$5L + 4L = 14K - 5K$$

$$\frac{9L}{9} = \frac{9K}{9} \quad K:L$$

∴ The ratio is 1:1

$$\therefore y = \frac{Ly_1 + Ky_2}{L+K}$$

$$y = -3, y = 9, y_2 = -15, L=?, K=?$$

$$\text{Solve } -3 = \frac{L(9) + K(-15)}{L+K}$$

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

C.L.T

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

$$-12K = 12L$$

$$\therefore K = L$$

## R divides PQ

(5) ~~2Lx<sub>1</sub> - Kx<sub>2</sub>~~  
~~2Lx<sub>1</sub> - Kx<sub>2</sub>~~  
 $L = 10$

$$x_1 = 5 \quad x_2 = 4 \quad x_2 = 14 \quad L = 3 \quad K = 3$$

$$14 = \frac{L(5) - K(-4)}{L - K}$$

$$14 = \frac{L(5) - K(-4)}{L - K}$$

$$14L - 14K = 5L + 4K$$

$$14L - 5L = 4K + 14K$$

$$\frac{9L}{9} = \frac{18K}{9}$$

ratio:

$$\therefore L : K = 1 : 2 \text{ or } K : L = 2 : L$$

$\therefore$  The ratio