

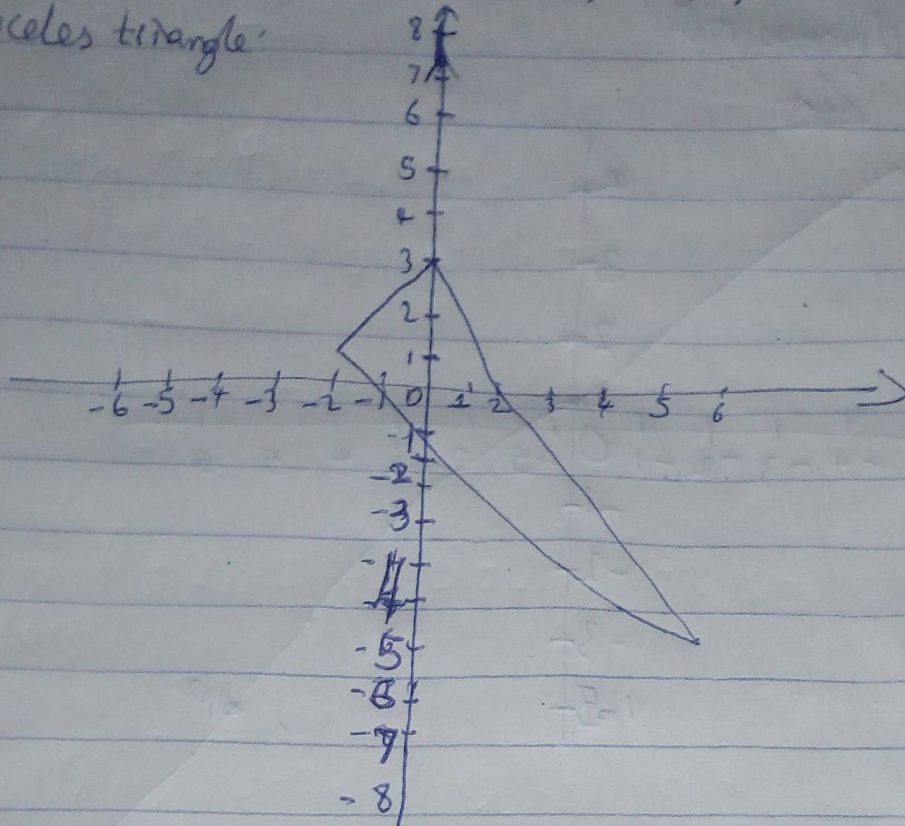
Name: Okunade Olatunde George

Course: Mat 102

Matric No. 19/ENG09/018

Assignment

1) Show that the point $A(6, -5)$, $B(-2, 1)$, $C(0, 3)$ form an isosceles triangle.



$$\begin{aligned} \text{The distance between point AC} &= \sqrt{(0-6)^2 + (3-(-5))^2} \\ &= \sqrt{36+64} = 10 \\ &= \sqrt{100} \\ &= 10 \end{aligned}$$

$$\begin{aligned} \text{Between Point AB} &= \sqrt{(-2-6)^2 + (1-(-5))^2} \\ &= \sqrt{64+36} \\ &= \sqrt{100} \\ &= 10 \end{aligned}$$

$$\begin{aligned} \text{Between Point BC} &= \sqrt{(0-(-2))^2 + (3-1)^2} \\ &= \sqrt{4+4} \\ &= \sqrt{8} \end{aligned}$$

∴ The point $A(6, -5)$, $B(-2, 1)$ and $C(0, 3)$ form

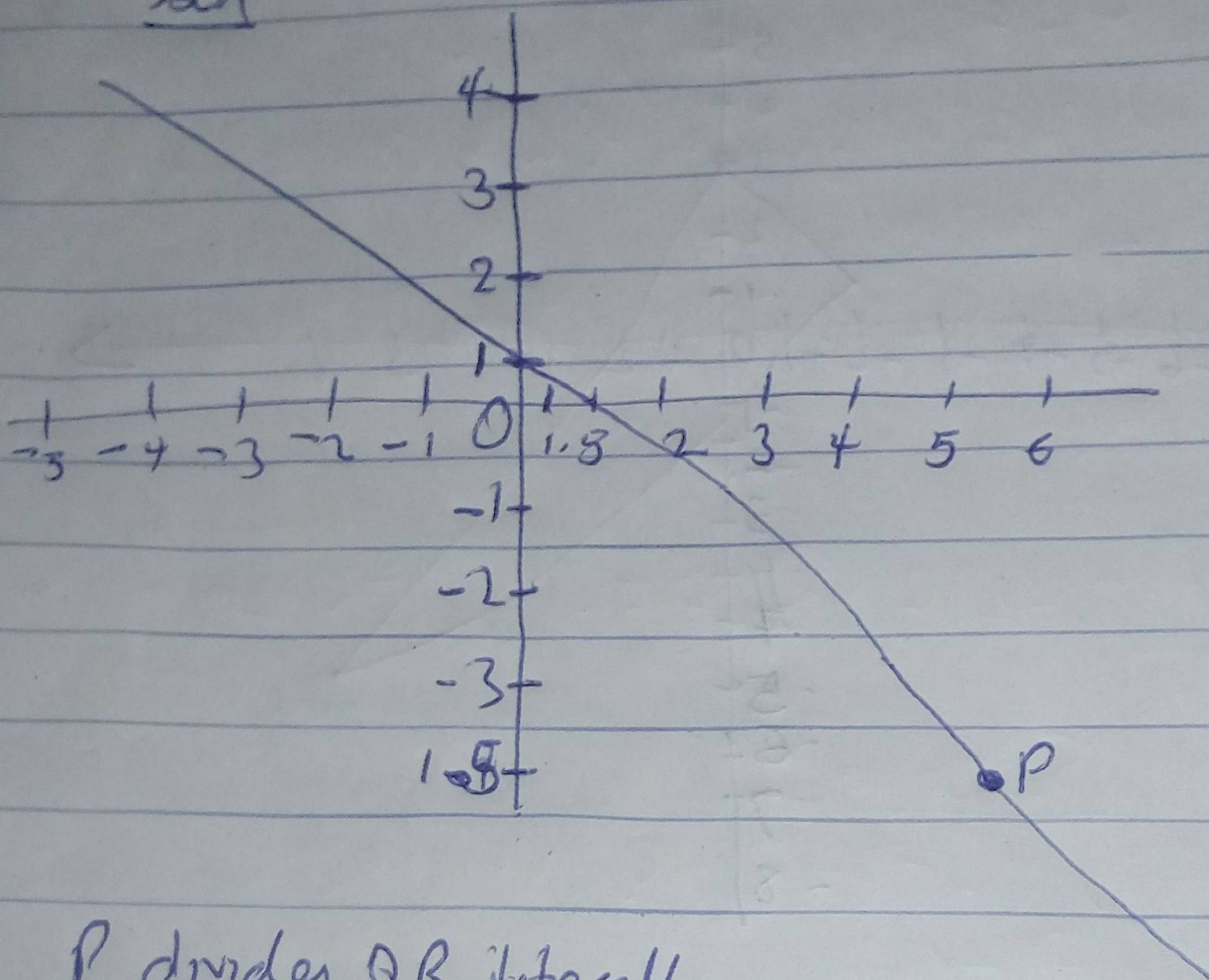
on isosceles triangle because both lines are equal.

2) If P, Q and R are points $(5, -3)$, $(-4, 9)$ and $(14, \dots)$ respectively, find the ratio in which

a) P divides QR

b) R divides PQ

Soln



P divides QR internally

$$Q = (x_1, y_1) \quad x_1 = -4$$

$$R = (x_2, y_2) \quad x_2 = 14$$

$$P = (x_3, y_3) \quad x = 5$$