9/04/2020 Week 02

S/N 36 Zaechous Daniel Ayodeji

(1)

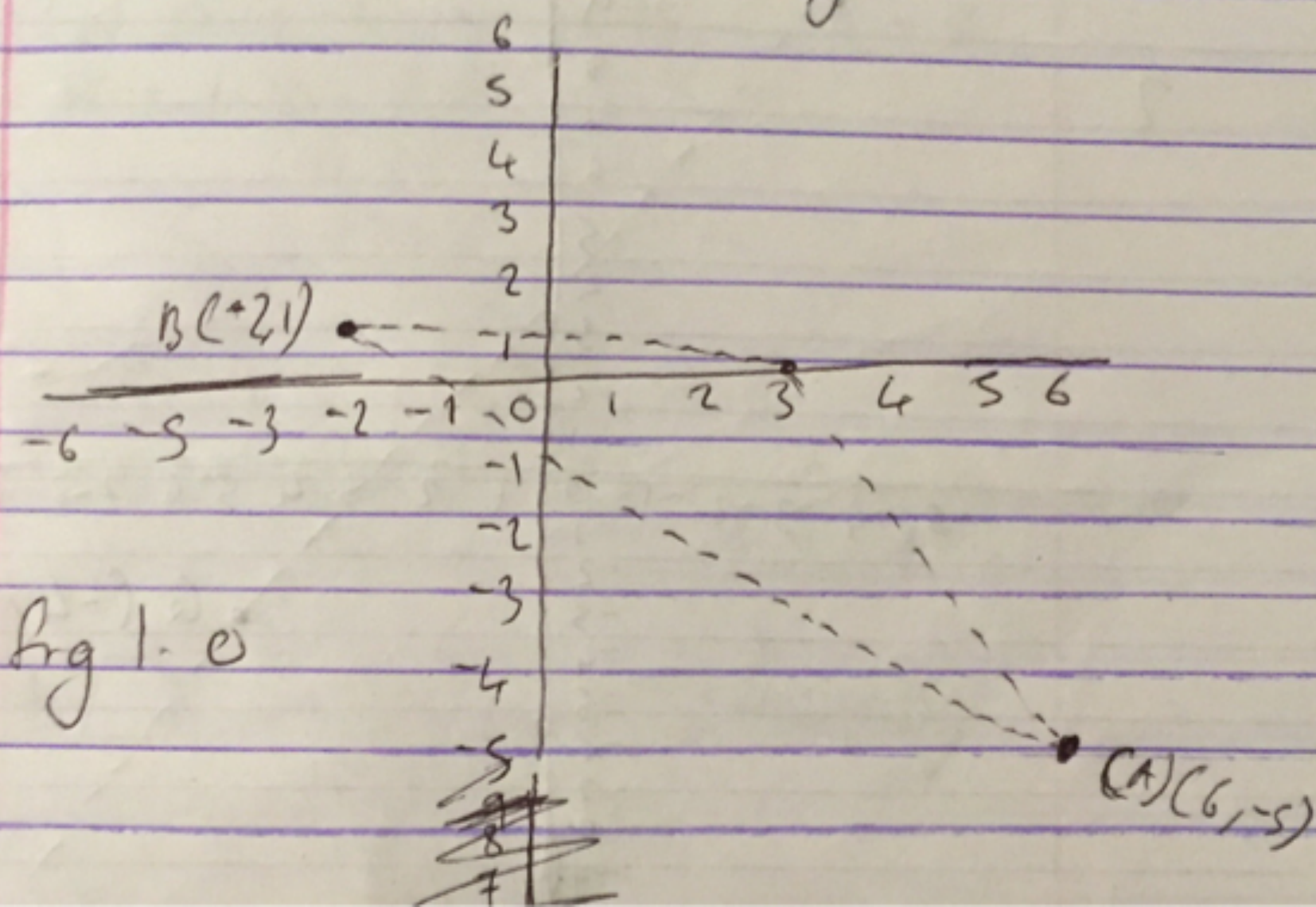


fig 1.0

$\overline{AB} = \sqrt{(-2-6)^2 + (1--5)^2} = \sqrt{100} = 10$

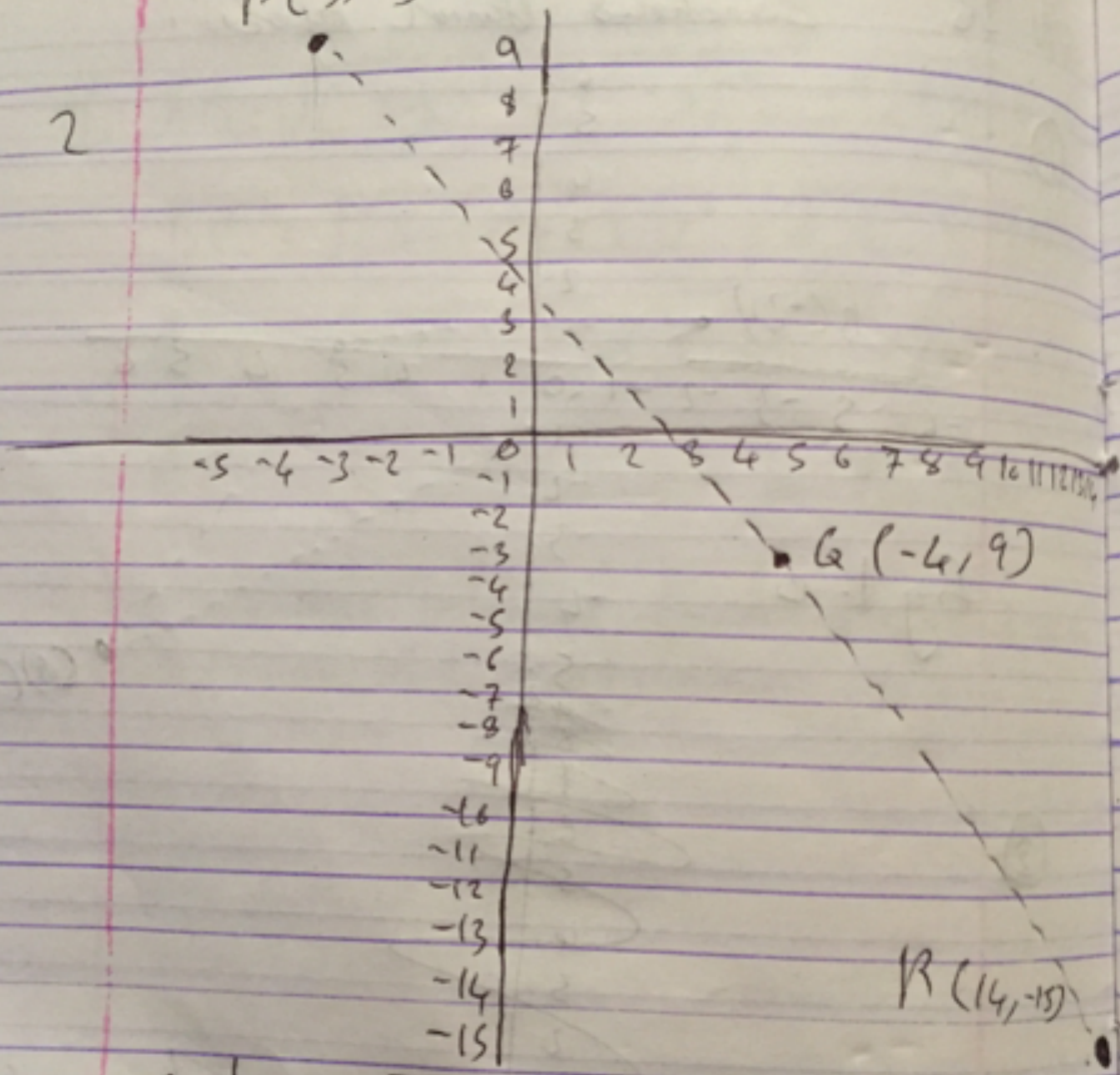
$\overline{BC} = \sqrt{(6-2)^2 + (3-1)^2} = \sqrt{8} = 2\sqrt{2}$

$\overline{AC} = \sqrt{(6-6)^2 + (3--5)^2} = \sqrt{100} = 10$

$\overline{AB} = \overline{AC}$ lod triangle ba fog 1.0

Since two sides of the triangle $\overline{AB}$ and
are equal it is isoceles.

2



a) P divides $\overline{QR}$ internally

$(x_1, y_1) = (-4, 9)$

$(x_2, y_2) = (14, -15)$

$(x, y) = (5, -3)$

Let $x_1 = -4 \quad x_2 = 14 \quad x = 5$

$$x = \frac{kx_2 + lx_1}{k + l}$$

$$5 = \frac{14k - 4l}{k + l} =$$

$$5k + 5l = 14k - 4l$$

$$-9k = -9l$$

$$k = l \quad \text{Ratio } 1:1$$

b) R Inside PQ externally

$$y = \frac{ly_1 - ky_2}{l - k}$$

$$(x_1, y_1) = (5, -3)$$

$$(x_2, y_2) = (-4, 9)$$

$$(x, y) = (14, -15)$$

$$y_1 = -3 \quad y_2 = 9 \quad y = -15$$

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

$$-15(l - k) = -3l - 9k$$

$$-12l = -24k$$

$$k/l = \frac{-24}{-12} = 2/1$$

Ratio 2:1