



Centroid of a Triangle

Name _____

Score _____

MC:13

Example : Find the centroid of the triangle whose vertices are $X(-3, -3)$, $Y(2, -2)$ and $Z(1, 4)$.

$$\text{Centroid} = \left(\frac{x_1 + x_2 + x_3}{3}, \frac{y_1 + y_2 + y_3}{3} \right) \quad x_1 = -3, x_2 = 2, x_3 = 1, y_1 = -3, y_2 = -2, y_3 = 4$$

$$\text{Centroid} = \left(\frac{-3 + 2 + 1}{3}, \frac{-3 - 2 + 4}{3} \right)$$

$$\text{Centroid} = \left(0, \frac{-1}{3} \right)$$

Find the centroid of each triangle whose vertices are

1) $A(3, -2)$, $B(0, 6)$ and $C(-3, -2)$

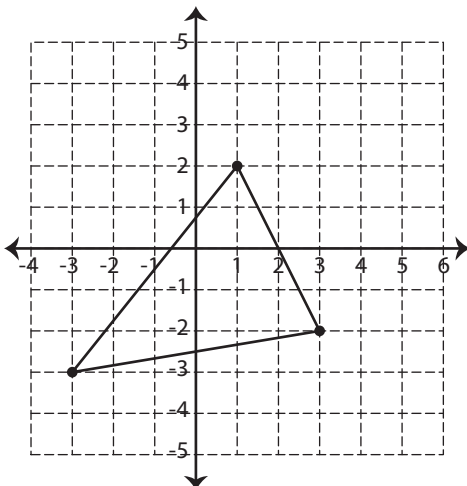
2) $P(6, 6)$, $Q(1, 4)$ and $R(5, 2)$

3) $U(-1, -5)$, $V(-4, 0)$ and $W(-2, -3)$

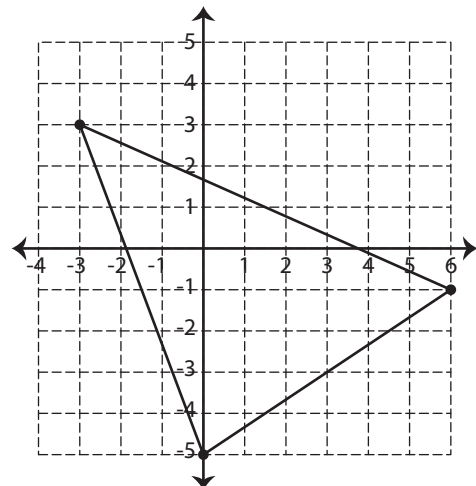
4) $J(6, 1)$, $G(-2, -11)$ and $H(-1, 4)$

Find the centroid of each triangle.

1)



2)





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Answer key

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Example : Find the centroid of the triangle whose vertices are X(-3, -3), Y(2, -2) and Z(1, 4).

$$\text{Centroid} = \left(\frac{x_1 + x_2 + x_3}{3}, \frac{y_1 + y_2 + y_3}{3} \right) \quad x_1 = -3, x_2 = 2, x_3 = 1, y_1 = -3, y_2 = -2, y_3 = 4$$

$$\text{Centroid} = \left(\frac{-3 + 2 + 1}{3}, \frac{-3 - 2 + 4}{3} \right)$$

$$\text{Centroid} = \left(0, \frac{-1}{3} \right)$$

Find the centroid of each triangle whose vertices are

1) A(3, -2), B(0, 6) and C(-3, -2)

$$\left(0, \frac{2}{3} \right)$$

2) P(6, 6), Q(1, 4) and R(5, 2)

$$(4, 4)$$

3) U(-1, -5), V(-4, 0) and W(-2, -3)

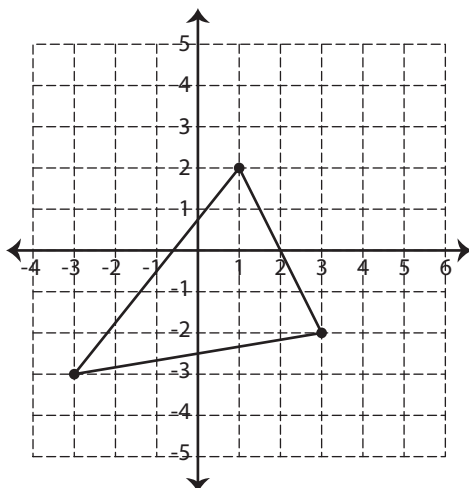
$$\left(-\frac{7}{3}, -\frac{8}{3} \right)$$

4) J(6, 1), G(-2, -11) and H(-1, 4)

$$(3, -6)$$

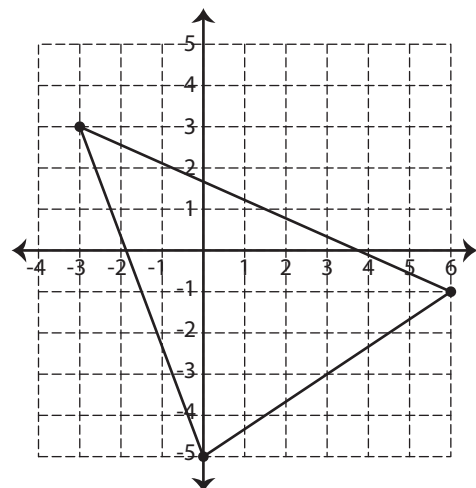
Find the centroid of each triangle.

1)



$$\left(\frac{1}{3}, -1 \right)$$

2)



$$(1, -1)$$