

1.(1 pt) The masses m_i are located at the points P_i . Find the center of mass of the system.

$$m_1 = 1, m_2 = 5, m_3 = 3.$$

$$P_1 = (-8, -4), P_2 = (-9, 7), P_3 = (8, -1).$$

$$\bar{x} = \underline{\hspace{2cm}}$$

$$\bar{y} = \underline{\hspace{2cm}}$$

2.(1 pt) Find the centroid (\bar{x}, \bar{y}) of the triangle with vertices at $(0, 0)$, $(7, 0)$, and $(0, 6)$.

$$\bar{x} = \underline{\hspace{2cm}}$$

$$\bar{y} = \underline{\hspace{2cm}}$$

3.(1 pt) Find the centroid (\bar{x}, \bar{y}) of the region bounded by:

$$y = 2x^2 + 9x, \quad y = 0, \quad x = 0, \quad \text{and} \quad x = 8$$

$$\bar{x} = \underline{\hspace{2cm}}$$

$$\bar{y} = \underline{\hspace{2cm}}$$