HW 9-1 Soln)

We can treat this as two separate problems. The x coördinate of the center of mass is given by

$$x_{CM} = \frac{\sum_n m_n x_n}{\sum_n m_n} = \frac{4(-5) + 9(-1) + 1(2) + 2(7)}{4 + 9 + 1 + 2} = \frac{-13}{16} = \boxed{-0.813 \text{ m}} \; .$$

$$y_{CM} = \frac{\sum_n m_n y_n}{\sum_n m_n} = \frac{4(1) + 9(-2) + 1(4) + 2(-5)}{4 + 9 + 1 + 2} = \frac{-20}{16} = \boxed{-1.25 \text{ m}} \; .$$