

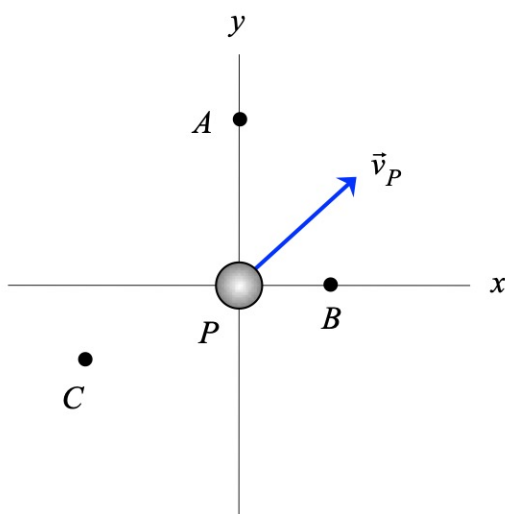
**Homework H.4.S**

**Given:** Particle P (of mass  $m$ ) travels in the  $x$ - $y$  plane with a velocity of  $\vec{v}_P$ .

**Find:** For this problem:

- (a) The angular momentum of P about point A,  $\vec{H}_A$ .
- (b) The angular momentum of P about point B,  $\vec{H}_B$ .
- (c) The angular momentum of P about point C,  $\vec{H}_C$ .

Write your answers as vectors.



Use the following parameters in your analysis:  $m = 5$  kg,  $\vec{v}_P = (20\hat{i} + 15\hat{j})$  m/s and the following  $(x, y)$  coordinates for points A, B, C and P: A : (0, 1.2) m, B : (0.9, 0) m, C : (-0.4, -0.3) m, and P : (0, 0) m.