----- Problem 1 ----- What is the torque about the origin due to a force $\vec{F} = (3\hat{i} + 5\hat{j} - 2\hat{k})$ N applied at position $\vec{r} = (4\hat{i} - 2\hat{j} + 5\hat{k})$ m?

----- Problem 2 ----- What is the total angular momentum about the origin for the depicted two particle system if the speeds of the particles are both 10 m/s?

Answers
1. $\tau = (-21 \hat{i} + 23 \hat{j} + 26 \hat{k})$ N*m
2. $L_{\text{system}} = (-10 \hat{k})$ m*kg*m/s