HW 9-1 Soln)

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

### $$x\_{CM}= \frac{\sum\_{n}^{}m\_{n}x\_{n}}{\sum\_{n}^{}m\_{n}}=\frac{4\left(-5\right)+9\left(-1\right)+1\left(2\right)+2(7)}{4+9+1+2}=\frac{-13}{16}= -0.813 m .$$

### $$y\_{CM}= \frac{\sum\_{n}^{}m\_{n}y\_{n}}{\sum\_{n}^{}m\_{n}}=\frac{4\left(1\right)+9\left(-2\right)+1\left(4\right)+2(-5)}{4+9+1+2}=\frac{-20}{16}= -1.25 m .$$