

0.1 Homework 01 - Forces + Newton's Laws

9.

a)

$$\begin{aligned}a_x(0.7) &= \frac{d}{dx}v_x(0.7) = \frac{d}{dx} - 15 + 2t - 4t^3 \Big|_{t=0.7} \\ &= \boxed{-3.88m/s^2}\end{aligned}$$

$$\begin{aligned}a_y(0.7) &= \frac{d}{dy}v_y(0.7) = \frac{d}{dy} 25t + 7t - 9t^2 \Big|_{t=0.7} \\ &= \boxed{19.4m/s^2}\end{aligned}$$

13.

17.

26.

27.

41.

44.

54.