

17. We represent its initial direction of motion as the $+x$ direction, so that $v_0 = +18 \text{ m/s}$ and $v = -30 \text{ m/s}$ (when $t = 2.4 \text{ s}$). Using Eq. 2-7 (or Eq. 2-11, suitably interpreted) we find

$$a_{\text{avg}} = \frac{(-30) - (+18)}{2.4} = -20 \text{ m/s}^2$$

which indicates that the average acceleration has magnitude 20 m/s^2 and is in the opposite direction to the particle's initial velocity.