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This is a 1-D problem involving average acceleration.

A particle is moving towards the right at 21 m/s , at a time of 3.1 s , and is moving towards the left at 18 m/s , at a time of 6.4 s . What is the average acceleration of the particle from 3.1 s to 6.4 s ?

Solution:

$$\bar{a} = \frac{\Delta v}{\Delta t} \quad \begin{array}{l} \text{(right)} \\ \longrightarrow + \text{ (sign convention)} \\ \text{(left)} \\ \longleftarrow - \end{array}$$

$$\Delta v = v(6.4 \text{ s}) - v(3.1 \text{ s}) = -18 - 21$$

$$\Delta t = 6.4 \text{ s} - 3.1 \text{ s} = 3.3 \text{ s}$$
$$= -39 \text{ m/s}$$

$$\bar{a} = \frac{-39 \text{ m/s}}{3.3 \text{ s}} = -11.82 \text{ m/s}^2$$

The average acceleration is 11.82 m/s^2 to the left.
(answer)