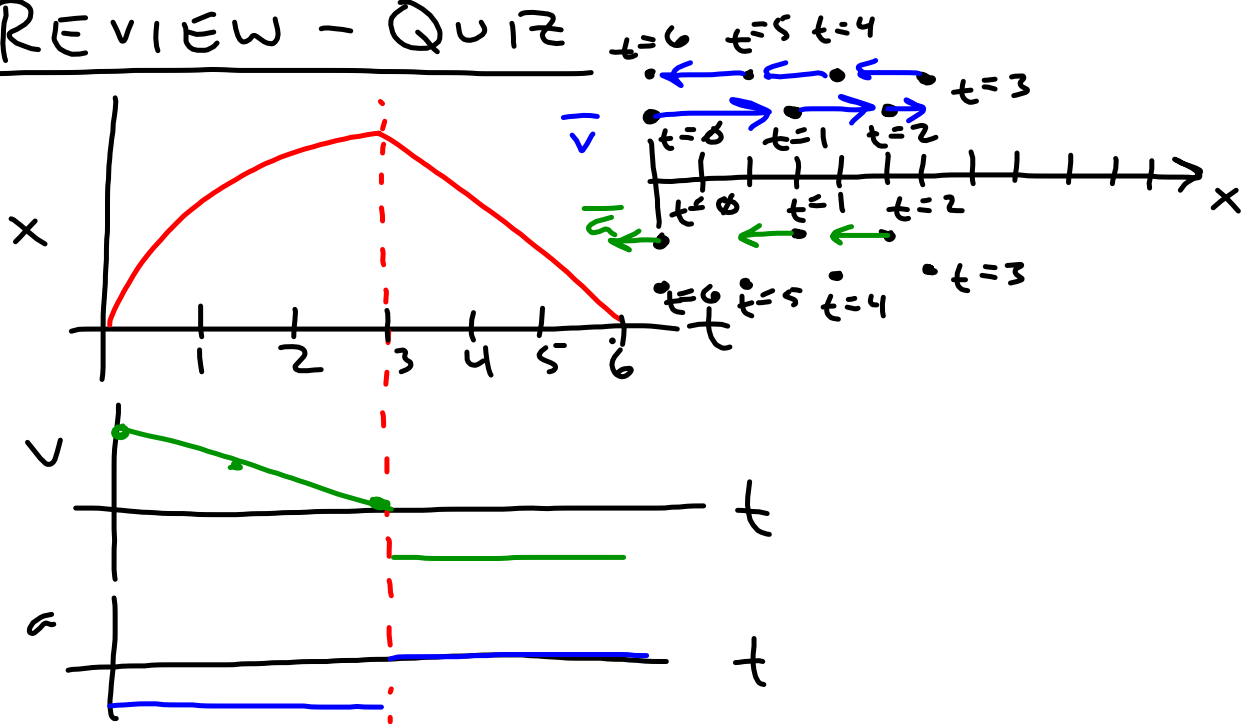
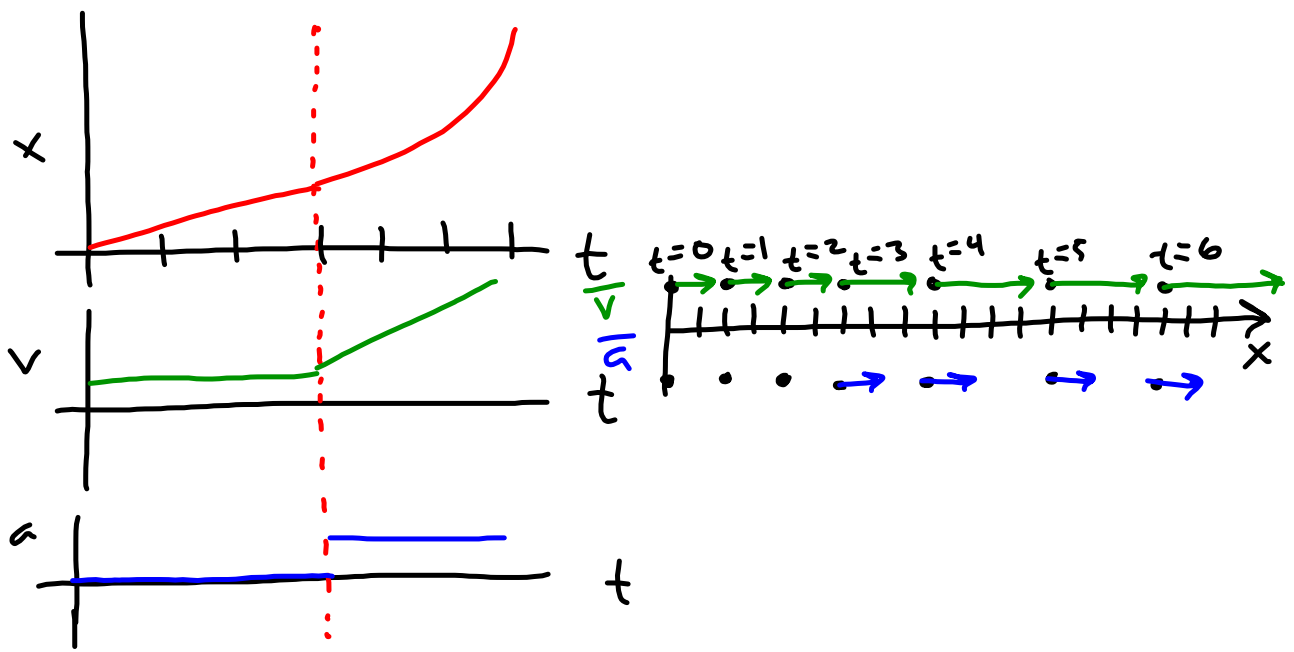
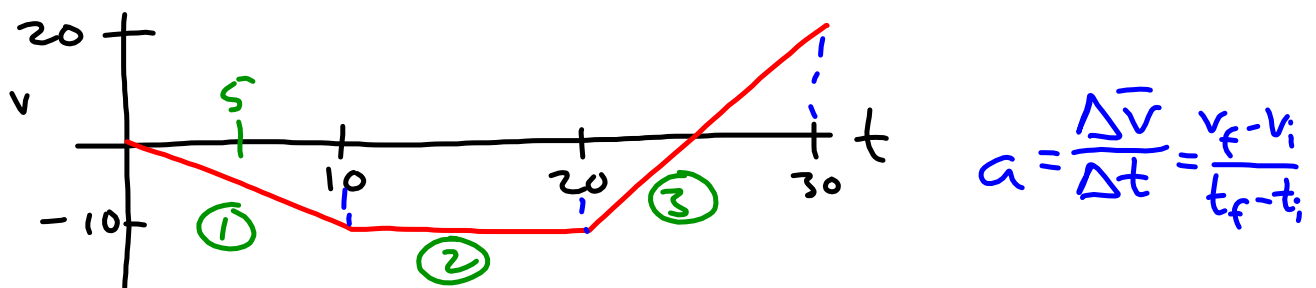


REVIEW - QUIZ







Find acceleration of each section:

$$\bar{a}_1 = \frac{-10 \text{ m/s} - 0 \text{ m/s}}{10 \text{ s} - 0 \text{ s}} = -1 \text{ m/s}^2$$

$$\bar{a}_2 = 0 \text{ m/s}^2$$

$$\bar{a}_3 = \frac{20 \text{ m/s} - (-10 \text{ m/s})}{30 \text{ s} - 20 \text{ s}} = \frac{30 \text{ m/s}}{10 \text{ s}} = 3 \text{ m/s}^2$$

A car is traveling at 20 m/s and accelerates at 3 m/s/s for 100 m. What is the car's final velocity?

$$v_i = 20 \text{ m/s}$$

$$a = 3 \text{ m/s}^2$$

$$\Delta x = 100 \text{ m}$$

$$v_f = ?$$

$$v_f^2 = v_i^2 + 2a\Delta x$$

$$v_f = \sqrt{v_i^2 + 2a\Delta x}$$

$$= \sqrt{(20 \text{ m/s})^2 + 2(3 \text{ m/s}^2)(100 \text{ m})}$$

$$= 31.62 \text{ m/s}$$