

$$a = v \frac{dv}{dx}$$

$$a_1 = a(20) = v(20) \times \frac{dv}{dx}(20)$$

$$= \frac{20}{3} \times \frac{50}{150} = \cancel{\frac{20}{3} \times \frac{50}{150}} \frac{20}{9}$$

$$a_2 = a(195) = v(195) \times \frac{dv}{dx}(195)$$

$$= 5x - 1 = -5$$