



integrate acceleration twice

$$v(0) = 0$$

$$s(0) = 0$$

$$\Rightarrow a_A = 15t - 1$$

$$a_B = 11t^2 - 6$$

$$d_A = 15t^3 \times \frac{1}{6} - t^2 \times \frac{1}{2} = \frac{5}{2}t^3 - \frac{1}{2}t^2 = 634.9$$

$$d_B = 11t^4 \times \frac{1}{12} - 6t^2 \times \frac{1}{2} = \frac{11}{12}t^4 - 3t^2 = 1415.0$$

$$\Delta s = 780.151$$