2/5 $a = \frac{dv}{dt} = 2t - 10$

$$\int_{v_0=3}^{v} dv = \int_0^t (2t-10)\,dt, \quad \underline{v = 3 - 10t + t^2 \text{ (m/s)}}$$

$$\frac{ds}{dt} = 3 - 10t + t^2$$

$$\int_{s_0=-4}^{s} ds = \int_0^t (3 - 10t + t^2)\,dt$$

$$\underline{s = -4 + 3t - 5t^2 + \tfrac{1}{3}t^3 \text{ (m)}}$$