96. We take $+x$ in the direction of motion, so

$$v = (60\,\text{km/h})\left(\frac{1000\,\text{m/km}}{3600\,\text{s/h}}\right) = +16.7\ \text{m/s}$$

and $a > 0$. The location where it starts from rest ($v_0 = 0$) is taken to be $x_0 = 0$.

(a) Eq. 2-7 gives $a_{\text{avg}} = (v - v_0)/t$ where $t = 5.4$ s and the velocities are given above. Thus, $a_{\text{avg}} = 3.1\ \text{m/s}^2$.

(b) The assumption that $a =$ constant permits the use of Table 2-1. From that list, we choose Eq. 2-17:

$$x = \frac{1}{2}(v_0 + v)\,t = \frac{1}{2}(16.7)(5.4) = 45\ \text{m}\ .$$

(c) We use Eq. 2-15, now with $x = 250$ m:

$$x = \frac{1}{2}at^2 \quad \Longrightarrow \quad t = \sqrt{\frac{2x}{a}} = \sqrt{\frac{2(250)}{3.1}}$$

which yields $t = 13$ s.