1. A passenger elevator travels from the first floor to the 60th floor, a distance of 210 m, in 35 sec. What is the elevator's speed?

$$s = \frac{d}{t} = \frac{210\ m}{35\ sec} = 6\ \frac{m}{s}$$

2. A motorcycle is moving at a constant speed of 40 km/hr. How long does it take the motorcycle to travel a distance of 10 km?

$$s = \frac{d}{t} \Rightarrow (t)s = \frac{d}{t}(t) \Rightarrow \frac{ts}{(s)} = \frac{d}{(s)}$$

(solve for t)

$$\text{so} \Rightarrow t = \frac{d}{s} = \frac{10\ km}{40\ km/hr} = 0.25\ hr \quad (\text{or } 15\ min)$$

3. How far does a car travel in 0.75 hr, if it is moving at a constant speed of 88 km/hr?

$$s = \frac{d}{t} \Rightarrow (t)s = \frac{d}{t}(t)$$

(solve for d)

$$\text{so} \Rightarrow ts = d = 0.75\ hr \left(88\ \frac{km}{hr}\right) = 66\ km$$

4. A long-distance runner is running at a constant speed of 5 m/s. How long does it take the runner to travel 1 km?

from #2 above $\Rightarrow t = \frac{d}{s} = \frac{1\ km}{5\ \frac{m}{s}}$ these units need to be the same

known: $1\ km = 1000\ m$

$$\text{so} \Rightarrow \frac{1000\ m}{5\ \frac{m}{s}} = 200\ sec$$