38. Although the full specification of $\vec{F}_{\text{net}} = m\vec{a}$ in this situation involves both x and y axes, only the x-application is needed to find what this particular problem asks for. We note that $a_y = 0$ so that there is no ambiguity denoting a_x simply as a. We choose $+x$ to the right and $+y$ up, in Fig. 5-38. We also note that the x component of the rope's tension (acting on the crate) is $T_x = +450\cos 38^\circ = 355$ N, and the resistive force (pointing in the $-x$ direction) has magnitude $f = 125$ N.

(a) Newton's second law leads to

$$T_x - f = ma \implies a = \frac{355 - 125}{310} = 0.74 \text{ m/s}^2 \ .$$

(b) In this case, we use Eq. 5-12 to find the mass: $m = W/g = 31.6$ kg. Now, Newton's second law leads to

$$T_x - f = ma \implies a = \frac{355 - 125}{31.6} = 7.3 \text{ m/s}^2 \ .$$