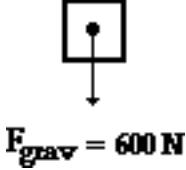
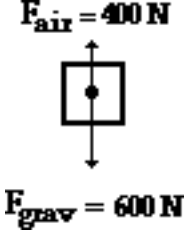
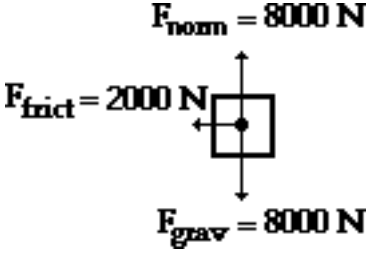
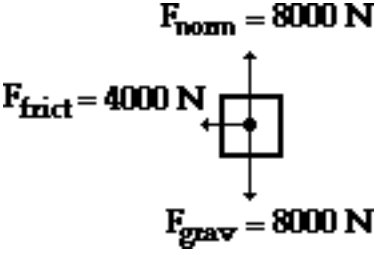
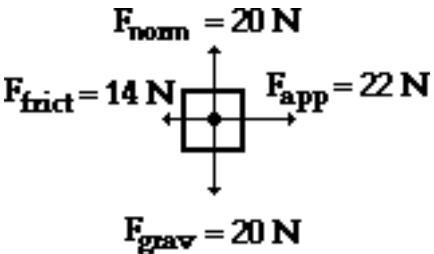
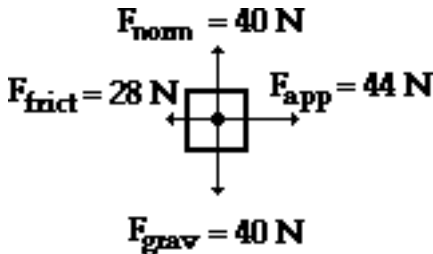


Newton's Laws

4. For each force diagram, determine the net or resultant force (ΣF), the mass and the acceleration of the object. Identify the direction (the second blank) of the two vector quantities. NOTE: F_{grav} stands for the weight of the object.

<p>a.</p>  <p>$F_{\text{grav}} = 600 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>	<p>b.</p>  <p>$F_{\text{air}} = 400 \text{ N}$</p> <p>$F_{\text{grav}} = 600 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>
<p>c.</p>  <p>$F_{\text{norm}} = 8000 \text{ N}$</p> <p>$F_{\text{frict}} = 2000 \text{ N}$</p> <p>$F_{\text{grav}} = 8000 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>	<p>d.</p>  <p>$F_{\text{norm}} = 8000 \text{ N}$</p> <p>$F_{\text{frict}} = 4000 \text{ N}$</p> <p>$F_{\text{grav}} = 8000 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>
<p>e.</p>  <p>$F_{\text{norm}} = 20 \text{ N}$</p> <p>$F_{\text{frict}} = 14 \text{ N}$</p> <p>$F_{\text{app}} = 22 \text{ N}$</p> <p>$F_{\text{grav}} = 20 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>	<p>f.</p>  <p>$F_{\text{norm}} = 40 \text{ N}$</p> <p>$F_{\text{frict}} = 28 \text{ N}$</p> <p>$F_{\text{app}} = 44 \text{ N}$</p> <p>$F_{\text{grav}} = 40 \text{ N}$</p> <p>$\Sigma F = \underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p> <p>m = $\underline{\hspace{2cm}}$</p> <p>a = $\underline{\hspace{2cm}} / \underline{\hspace{2cm}}$</p>