
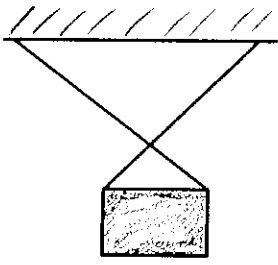
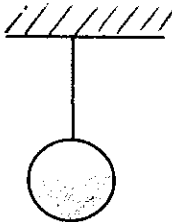

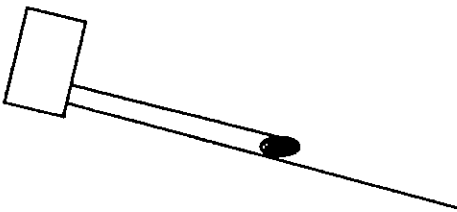
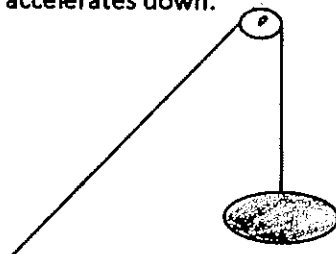
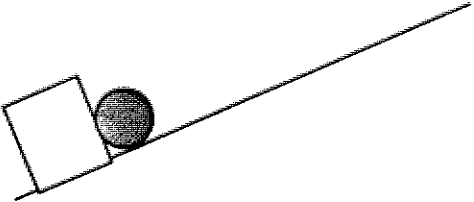


FREE-BODY DIAGRAMS (FBDs)

- Free-body diagrams are diagrams used to show the relative magnitude and direction of all forces acting upon an object in a given situation.
- Knowing that F_N is a force exerted by a surface of contact, it is customary not to draw this surface or the ground.
- FBD shows only an object (usually a dot with a rectangle around it) and forces (arrows) acting on the object.
- Length of the arrows should be relative to the magnitude of the forces.
- Direction of the arrows should show exact direction of the forces.

Practice: Assume that the object is stationary and friction is negligible unless stated otherwise.

<p>1. A free - falling ball.</p> 	<p>5.</p> 
<p>2.</p> 	<p>6.</p> 
<p>3.</p> 	<p>7. An object is hung over a frictionless pulley and accelerates down.</p> 
<p>4.</p> 	<p>8. An object is hung over a frictionless pulley and accelerates up.</p> 