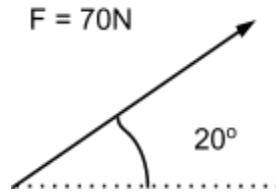


1. A sled is being dragged across the ground as shown below. If the sled moves a distance of 20m, what is the work done on the sled?



2. A block is sitting on an incline that makes an angle of  $35^\circ$  with the horizontal. If the object is being held in place due to friction, find the magnitude of the static friction force. The mass of the object is 52 kg.
  - a. If the block slides down the plane a distance of 2 meters, find the work done by the frictional force.
3. An object is launched with a velocity of 100 m/s at an angle of  $30^\circ$ . Find the maximum height of the projectile using energy methods.
4. An object with a mass of 15kg is pushed with a force of 100N and experiences a frictional force of 40N. The object moves a distance of 20m. If the object starts with zero velocity, find the final velocity.
5. A projectile has 120J of kinetic energy and a mass of 15kg. If it is launched at an angle of  $15^\circ$  find the maximum height of the object