Name: **Part 2 Review**

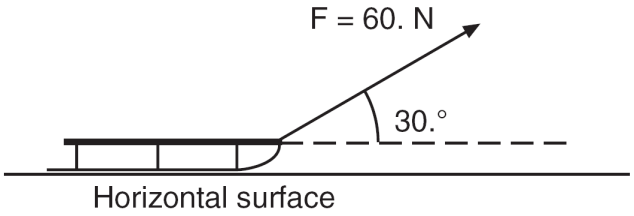
1. Base your answer to the following question on the information below.

A 747 jet, traveling at a velocity of 70. meters per second north, touches down on a runway. The jet slows to rest at the rate of 2.0 meters per second^2.

Calculate the total distance the jet travels on the runway as it is brought to rest. [Show all work, including the equation and substitution with units.]

Base your answers to questions **2** and **3** on the information below.

A force of 60. newtons is applied to a rope to pull a sled across a horizontal surface at a constant velocity. The rope is at an angle of 30. degrees above the horizontal.



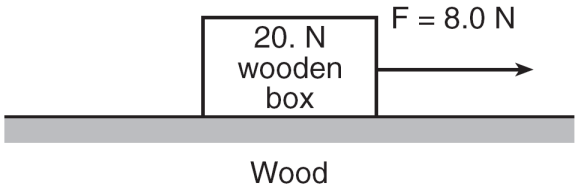
2. Determine the magnitude of the frictional force acting on the sled.

3. Calculate the magnitude of the component of the 60.-newton force that is parallel to the horizontal surface. [Show all work, including the equation and substitution with units.]

Part 2 Review

Base your answers to questions **4** through **8** on the information below.

A horizontal force of 8.0 newtons is used to pull a 20.-newton wooden box moving toward the right along a horizontal, wood surface, as shown.



4. Starting at point *P* on the diagram below, use a metric ruler and a scale of 1.0 cm = 4.0 N to draw a vector representing the normal force acting on the box. Label the vector F_N.

5. Calculate the magnitude of the frictional force acting on the box. [Show all work, including the equation and substitution with units.]

6. Determine the magnitude of the net force acting on the box.

7. Determine the mass of the box.

8. Calculate the magnitude of the acceleration of the box. [Show all work, including the equation and substitution with units.]