Name **Part 2 Review B**

Base your answers to questions **1** and **2** on the information below.

A student and the waxed skis he is wearing have a combined weight of 850 newtons. The skier travels down a snow-covered hill and then glides to the east across a snow-covered, horizontal surface.

1. Calculate the magnitude of the force of friction acting on the skis as the skier glides across the snow-covered, horizontal surface. [Show all work, including the equation and substitution with units.]

2. Determine the magnitude of the normal force exerted by the snow on the skis as the skier glides across the horizontal surface.

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3. Base your answer to the following question on A 0.50-kilogram frog is at rest on the bank surrounding a pond of water. As the frog leaps from the bank, the magnitude of the acceleration of the frog is 3.0 meters per second^2 . Calculate the magnitude of the net force exerted on the frog as it leaps. [Show all work, including the equation and substitution with units.

Part 2 Review B

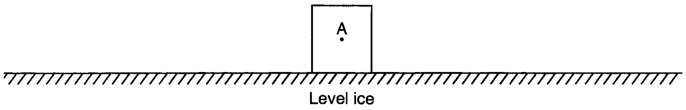
Base your answers to questions **4** through **7** on the information below.

An ice skater applies a horizontal force to a 20.-kilogram block on frictionless, level ice, causing the block to accelerate uniformly at 1.4 meters per second^2 to the right. After the skater stops pushing the block, it slides onto a region of ice that is covered with a thin layer of sand. The coefficient of kinetic friction between the block and the sand-covered ice is 0.28.

4. Calculate the magnitude of the force of friction acting on the block as it slides over the sand-covered ice. [Show all work, including the equation and substitution with units.]

5. Determine the magnitude of the normal force acting on the block.

6. On the diagram below, starting at point *A*, draw a vector to represent the force applied to the block by the skater. Begin the vector at point *A* and use a scale of 1.0 centimeters = 5.0 newtons.



7. Calculate the magnitude of the force applied to the block by the skater [Show all work, including the equation and substitution with units.]