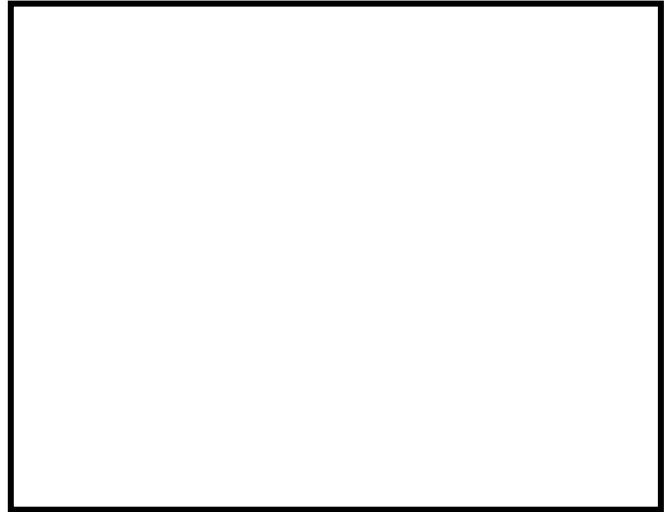


Physics 151 Class Exercise: Vectors

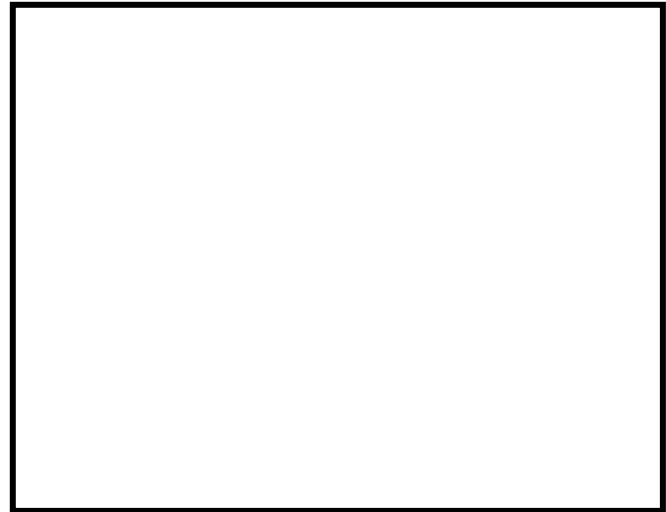
1. To move a large crate across a rough floor, you push down on it an angle of 21° . Find the force necessary to start the crate moving, given that the mass of the crate is 32 kg and the coefficient of static friction between the crate and the floor is 0.57. (Start with a free-body diagram, add a coordinate system, and then write the equations for the summation of forces. Remember that you will need to determine the normal force to include friction.)



Answer:

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2. A skier travels down the trail as shown below. The slope is inclined at an angle of 22° and the coefficient of kinetic friction is 0.2. What is the skier's acceleration down the hill?



Answer:	
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