

$$g = 9.8 \text{ m/s}^2$$

Snow and ice of mass $73,000 \text{ kg}$ is beginning to fall from the mountain below.
Sound energy released is $100,000 \text{ J}$.
Heat energy from friction is $500,000 \text{ J}$.

Center of mass



#1 A skier at the top of the mountain wants to ride the avalanche down the mountain. How fast must the skier travel in front of the avalanche in order to not be caught in it? Find his velocity at A.

#2 Santa Claus is coming to town and is driving his sleigh at the bottom of the mountain near point B. What is the minimum speed Santa must travel in order to not be caught by the avalanche.