

A  $2.1 \times 10^3$  kg car starts from rest at the top of a driveway that is sloped at an angle of  $20.0^\circ$  with the horizontal. An average friction force of  $4.0 \times 10^3$  N impedes the car's motion so that the car's speed at the bottom of the driveway is 3.8 m/s. What is the length of the driveway?