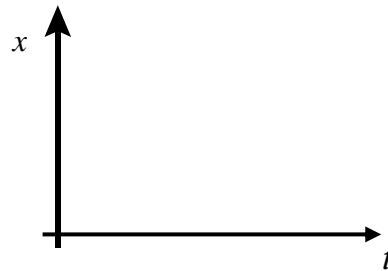
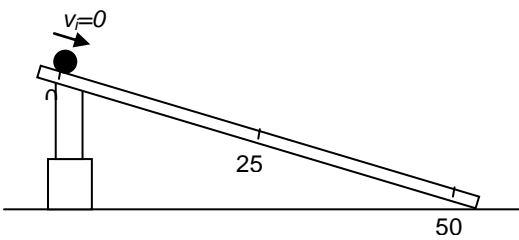


1. What is the acceleration of a car that travels in a straight line at a constant speed?
2. While driving a car, what are two ways you could cause the car to accelerate?

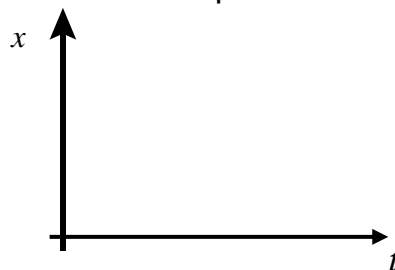
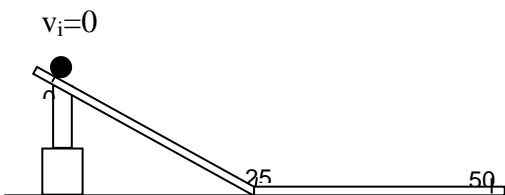


3. A rollercoaster rapidly picks up speed as it rolls down a slope. As it starts down the slope, its speed is 4 m/s. Three seconds later, its speed is 22 m/s. What is its acceleration?

4. For the situation below, draw a qualitative graph of position vs. time.



5. For the situation below, draw a qualitative graph of position vs. time. Assume the ball does not experience any change in velocity while on the flat part of the track.

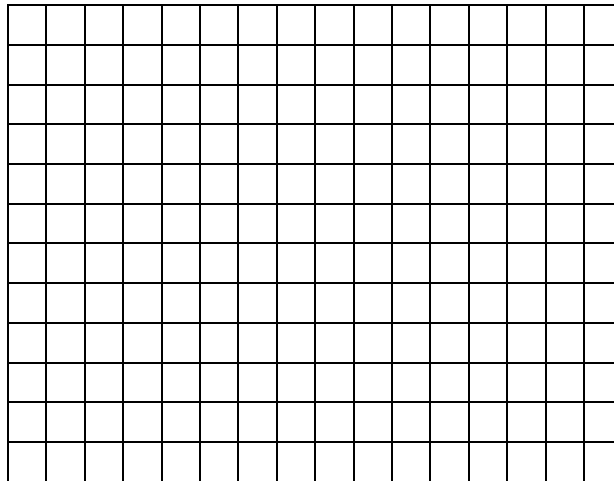


6. When hit by Bubba Watson, a golf ball can reach a speed of 87 m/s in 0.005 s. What is the acceleration of the golf ball?



7. The data set below was taken for a wheel that started at rest rolling down a hill. Use the data to create a graph in the space provided.

t	x
(s)	(cm)
0.0	0.0
1.0	5.0
2.0	20.0
3.0	45.0
4.0	80.0
5.0	125.0
6.0	180.0



- What is the average velocity of the wheel after two seconds? What is the average velocity of the wheel after four seconds?
- What is the acceleration of the wheel from $t=2s$ to $t=4s$?