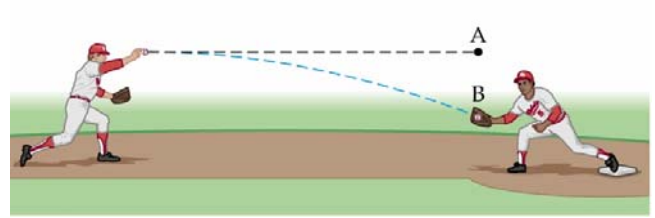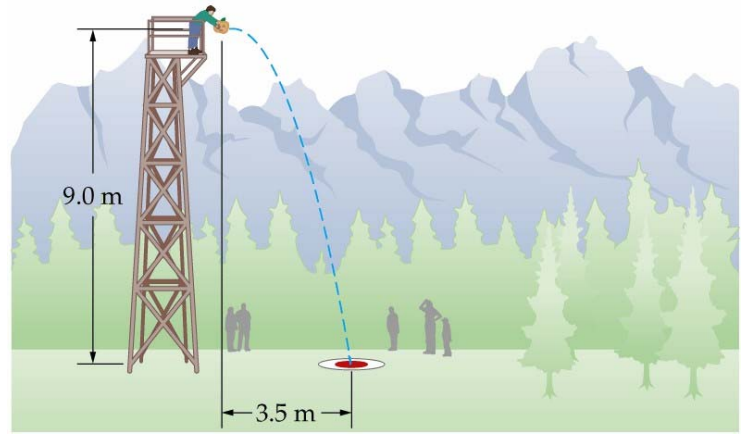# Physics 151 Class Exercise: 2-D Kinematics

1. Playing shortstop, you pick up a ground ball and throw it to second base. The ball is thrown horizontally, with a speed of 22. m/s, directory toward point A. When the ball reaches the second baseman 0.45 s later, it is caught at point B.
(a) How far were you from the second baseman?
(b) What is the distance of vertical drop?

x-motion		y-motion		
Known: **Solve:**		**Known:** **Solve:** **NI:**		

Answer:	
Answer:	

2.   In Denver, children bring their old jack-o-lanterns to the top of a tower and compete for accuracy in hitting a target on the ground. Suppose that the tower is 9.0 m high and that the bulls-eye is a horizontal distance of 3.5 m from the launch point. If the pumpkin is thrown horizontally, what is the launch speed needed to hit the bulls-eye?

9.0 m

←3.5 m→

x-motion		**y-motion**		
Known:	**Solve:**	**Known:**	**Solve:**	**NI:**

Answer:	