Physics 513 Name:
Projectile Motion Problem Set Date:

1. A child rolls his ball at 2 m/s off the edge of a 20 m high bridge. Solve for everything.

2. Isabella shoots a field hockey ball horizontally off a ledge 18 m above the ground, with a total initial velocity of 15 m/s. How far away will it land?

3. A cannonball is launched at an angle parallel to the ground from a cliff at 55 m/s and lands 400 meters away. From what height was it launched?

4. Trystan kicks a soccer ball at 10 m/s at an angle of 30° from the horizontal. It lands back on the field. Solve for everything.

5. An arrow is shot at 25 m/s at an angle of 35° from the horizontal and lands at the same height it was shot from. Solve for everything.

6. A baseball is thrown off a 30 meter high cliff and lands on the ground at the base of the cliff. If it was thrown with a total initial velocity of 20 m/s at an angle of 40 degrees above horizontal, how far away will it land?

7. TJ throws a ball at a wall that is 2 meters away. The ball is thrown at an angle of 65 degrees from the horizontal with a total velocity of 5 m/sec. What is the change in the ball's height from the moment it is thrown to the moment it hits the wall?

8. Mr. Prendergast quits the moving business to become a fieldgoal kicker in the NFL. If the crossbar is 26 m away and 3.05m high, and Mr. Prendergast kicks the ball such that it's velocity is 17 m/s and an angle of 40° above horizontal, will he make the kick?