

Name:

Period:

HORIZONTAL PROJECTILE PRACTICE PROBLEMS Answer on separate paper!!!

1. A stone is thrown horizontally at a speed of 10 m/s from the top of a cliff that is 78.4 meters high.

a. How long did it take for the stone to reach the ground?

b. How far from the base of the cliff does the stone land?

2. A steel ball bearing is shot horizontally at 20 m/s from the top of a 49 meter high tower. How far from the base of the tower does the projectile hit the ground?

3. A plastic marble with a constant velocity of 0.8 m/s rolls off the edge of a table. The table is 0.95 meters high. How far from the edge of the table does the ball land?

4. A person standing on a cliff throws a stone with a horizontal velocity of 15 m/s and the stone hits the ground 47 meters from the base of the cliff. How far does the stone fall?

5. A projectile is launched horizontally from the top of a building with a velocity of 12.7 m/s. At what height is the projectile launched if the projectile lands 15 meters from the side of the building.

6. An arrow is fired horizontally with a speed of 89 m/s directly at the bullseye of a target 60 meters away. When it is fired, the arrow is 1 m above the ground. Did the arrow strike the target? If not, how far did it travel?

Extra Credit: 7. Batman jumps from one rooftop to another rooftop that is 5 meters lower than the first. Assuming he jumps horizontally, and the second rooftop is 4.5 meters away, how fast does he have to be running to make it?