## **PROJECTILE MOTION – ASSIGNMENT**

Name:\_\_\_\_\_

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1. How long does it take for a 5.0-kg object to reach its maximum height if it was thrown with initially velocity of 120 m/s 62° above horizontal?

2. How much time will a projectile spend above ground if its landing level is identical with its launching level, and it was ejected with 95m/s 85°above horizontal?

3. Consider a projectile with initial velocity of 58m/s 49° above horizontal. How much time will it spend in the air if it lands 450m below its launching level?

4. Find the final velocity of a projectile that was thrown with 82 m/s [R39°U] and landed 135 m below its launching level. **Express this velocity in vector notation, find its magnitude and direction.** 

5. A 11-kg object is thrown with velocity of 105m/s 75° above horizontal. Provided that it lands at the same level it was thrown from, what is its range?

6. A ball is kicked of a 68m cliff. If its initially velocity was 17m/s [L]. How far does it land measured from the bottom of the cliff? Assume no obstacles in its path.