Dragon Shoot Lab Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Step One** - Determine :

Release the marble down the ramp. When the marble hits the table, start the stopwatch. Allow the marble to roll across the board (you must measure this distance). When the marble hits the metal rod, stop the stopwatch. Record the time in the table below. Repeat this process for a total of ten trials. Then take the average time.

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| **Time (s)** |
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**Step Two**- Determine the time of the fall, **t**:

Measure the vertical distance the marble will fall **(this is the height in centimeters)**. Use the equation below to find the time of fall. Remember the acceleration due to gravity on planet Earth = **981cm/s2**.

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**Step Three**- Determine forward distance, .



Due to friction, the actual distance will be slightly less. Subtract 4 cm from above. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_cm

Measure the forward distance you need and then place your dragon target at that distance. Place a piece of carbon paper over your target before performing your official dragon shoot.

**Official Dragon Shoots must be witnessed by your teacher!!!!!**

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