01-08b Projectile Motion Lab *Name: _____*

Adapted from "Shoot for Your Grade" by Jim Keefer

Objectives

- Predict the landing spot of a projectile launched horizontally from a desk.

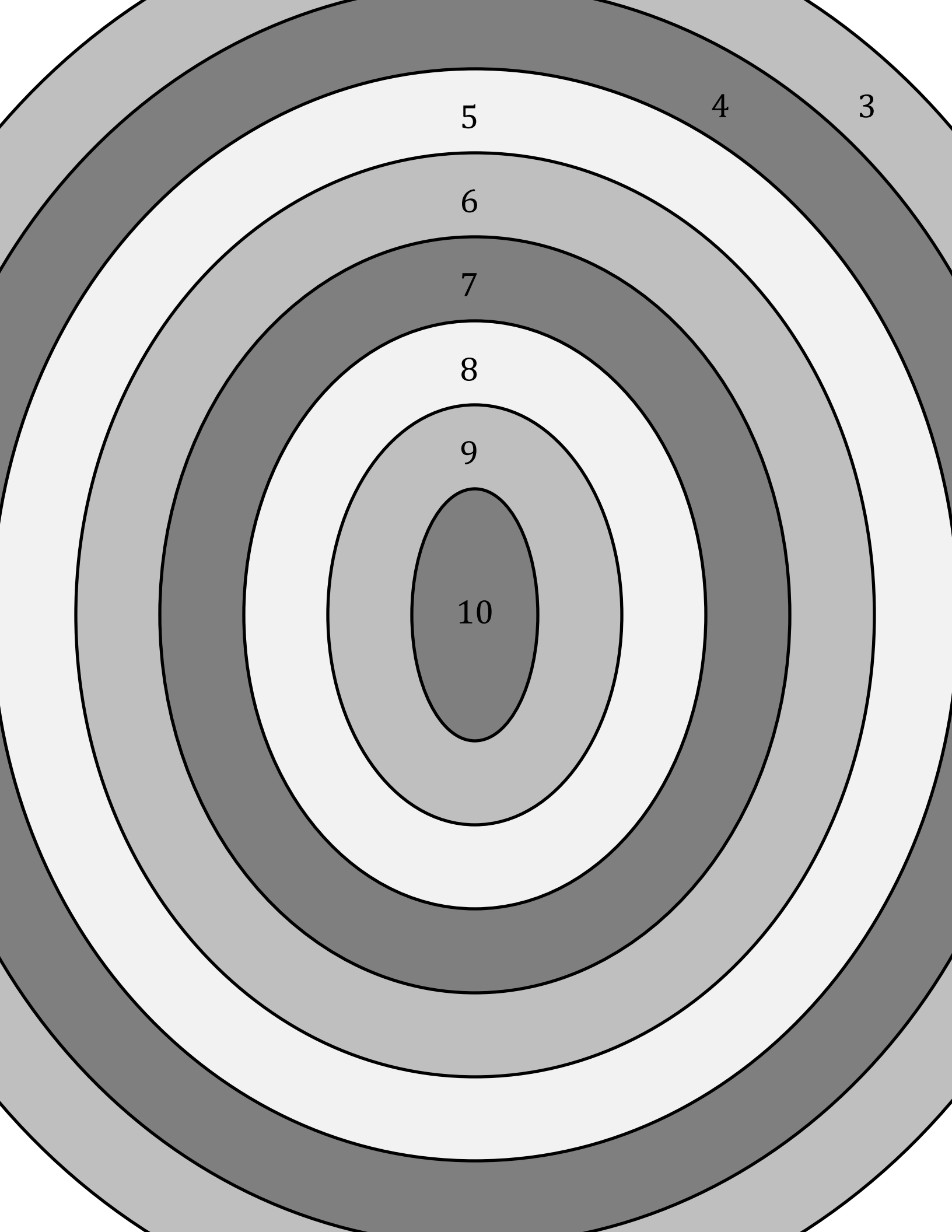
Materials

- Grooved ruler
- Marble
- Stopwatch
- Meter stick
- Target

Procedure

IMPORTANT! *The marble must never leave the desk when taking data.*

1. Make a gentle ramp using your ruler and a book.
2. Roll the marble down the ramp several times to determine the average speed it will have when it rolls off the desk. (We did this in a previous lab.)
3. Take measurements to **calculate** the time until the marble hits the floor. t = _____
4. Using the average speed and time of free fall, **calculate** the landing spot for your marble from directly below the edge of your desk. x = _____
5. Place the target at the calculated location.
6. Call over the teacher.
7. When the teacher is watching, roll the marble down the ramp and see where it lands. The target gives your grade. Grade = _____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