Bouncing Into Math Worksheet

Group Name: .

**Sketch a prediction of the graphs for each ball**

Tennis Ball Rubber Ball

**Directions:**

1. Open the Video Physics app on the Ipad.
2. Mark the floor where the edge of the video will be (also where the ball will start bouncing) with a piece of tape and then another piece of tape where the ball stops bouncing. Do a trial bounce to find out where the ball will stop bouncing. Measure this and take note of how many feet this is.
3. Select the Plus and take a video of ball bouncing on the floor until it stops bouncing. After you have a good video select “use video”.
4. Set your origin at the edge, where the first piece of tape is located and x-axis along the floor.
5. Set the scale by measuring the meter stick.
6. Select “point” and tap the middle of the cross-hairs at the top of the ball for each frame.
7. Select play and see if you captured the motion. If not start again with a new video.
8. Select graph and page through all three types of graphs.
9. Repeat steps 2 through 8 for the next ball.
10. Record your findings.

**Sketch the time vs. horizontal movement graph for each ball below**

Tennis Ball Rubber Ball

**Sketch the time vs. vertical movement graph for each ball below**

Tennis Ball Rubber Ball

**How did each graph differ?**

**If you were to compare a tennis ball to a basketball, do you think there would be a bigger difference than with the rubber ball? Explain your reasoning.**

**What other types of movement could you measure using this technology? Explain your reasoning.**