Activity Sheet - Collisions

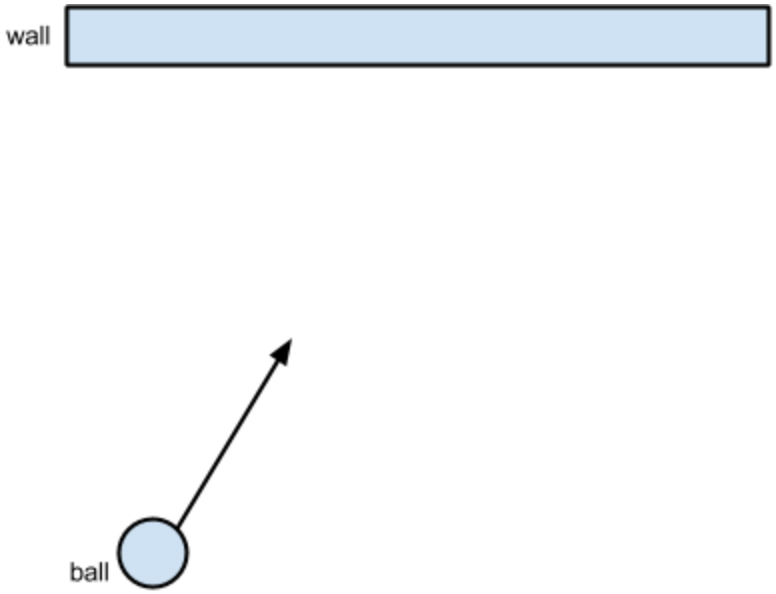
The trajectory of an object is the line described by a moving object.

Complete the trajectory of the ball by drawing a line in the following situations:
The arrow indicates the direction in which the ball was launched

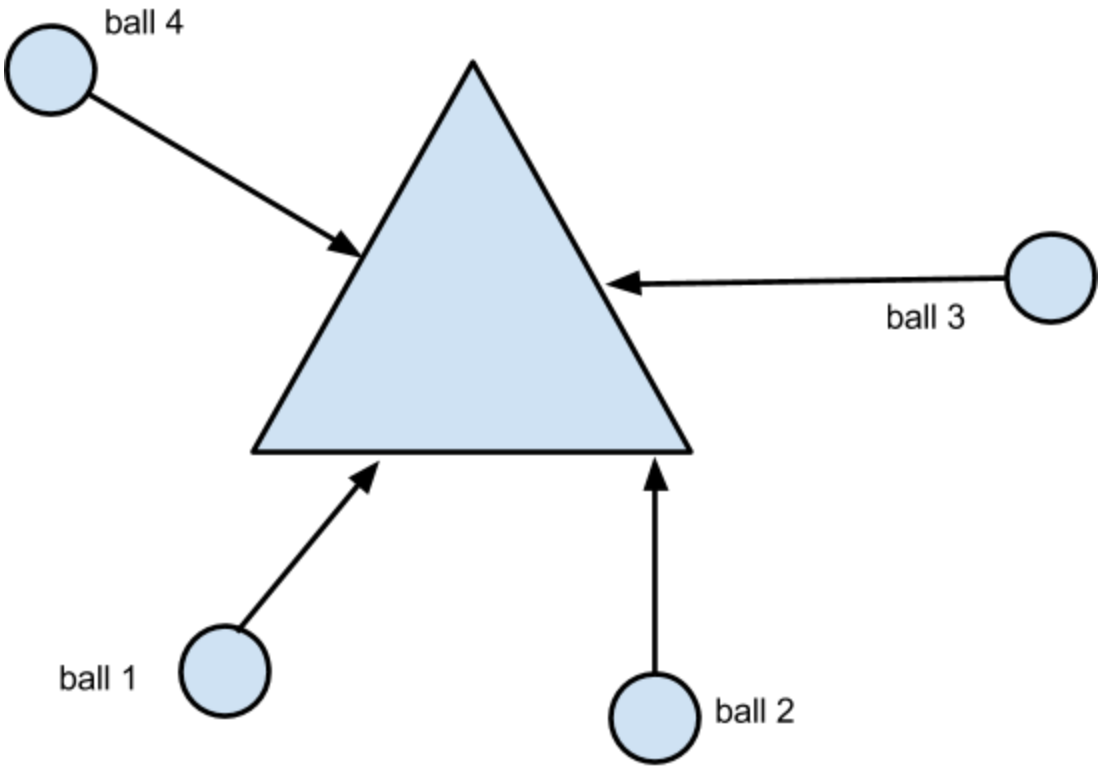
Situation A (No Obstacle): (view from above)

Situation B (With Obstacle): (view from above)

Situation C (With Obstacle): (view from above)



Here is a shape. Complete the trajectories of the different balls:
(view from above)



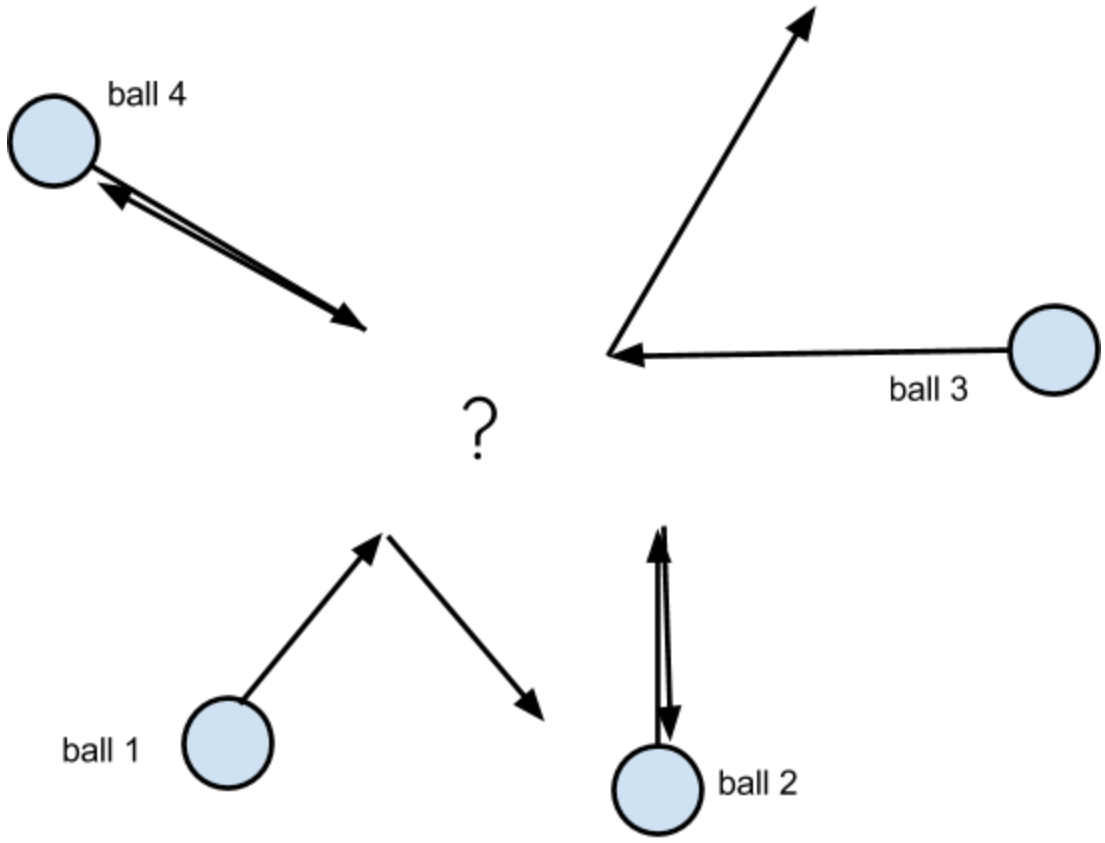
Complete the text with the following words: *"straight", "obstacle", "elephant", "angle"*

When I throw the ball straight against the obstacle, it comes back _____ towards me.

When I throw the ball at an angle, it bounces against the obstacle by making an _____.

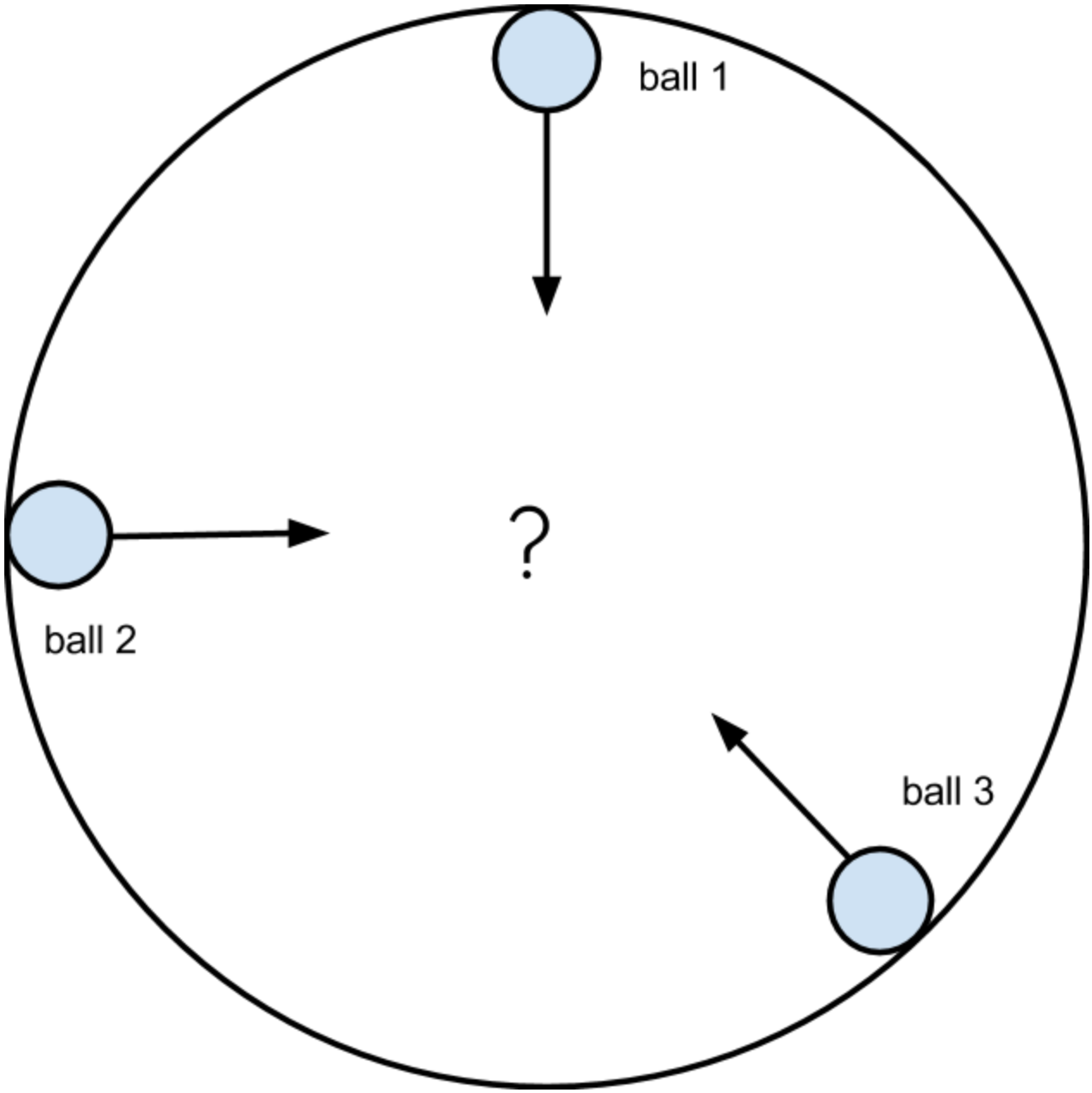
When I throw the ball and it doesn't hit the _____, it goes straight.

Using the trajectories below, guess the shape of the object (?) and draw it:



Now, using what we've learned about trajectories, we will use marbles to determine a mystery shape!

Here are some sample trajectories to try. Throw the marbles at your mystery shape at the different positions and record their trajectories below. Choose a few trajectories of your own to try as well, and draw them below.



When you think you've figured out what the shape is, draw it below:

What did the shape end up being? Draw the mystery shape below once it is revealed:

Bravo, you have successfully completed the Collisions Activity!

Stamp of Space Explorers Program - McGill: