

Quick Lab

Ellipses

Chapter 27.2

MATERIALS

- cork board
- pieces of paper, 3
- push pins, 2
- string, 25 cm long
- pencil

SAFETY**PROCEDURE**

1. Cover a cork board with a piece of paper. Put two push pins into the cork board, 5 cm apart.
2. Tie together the ends of a string that is 25 cm long. Loop the string around the pins.
3. Hold the string taut with a pencil, and move the pencil to outline an ellipse.
4. Replace the paper with another piece of paper. Place the pins 10 cm apart. Outline another ellipse by using the string.
5. Use another piece of paper. Loop the string around one pin, and outline another ellipse.

ANALYSIS

1. Which ellipse has an eccentricity closest to 0? Which has an eccentricity closest to 1? Describe the shape of your ellipse in terms of eccentricity.

2. Describe the ellipse as you increased the distance between the foci. Describe what would happen to the ellipse if you increased the length of the string without changing the distance between the foci.
