

1) Go to <http://www.mathguide.com/cgi-bin/quizmasters/CSparabolas.cgi> and respond accordingly.

Given information:

- a) Explain how you found the vertex of the parabola.
- b) How did you determine which way the parabola opens?
- c) Sketch the graph of the parabola to the right.
- d) Determine the focal length, which is the p-value.
- e) When this quizmaster was created, it had to write the correct template. Explain how you know the template is correct.
- f) Fill in the equation on the website until you are correct.

2) Go to <http://www.mathguide.com/cgi-bin/quizmasters/CSellipses.cgi> and respond accordingly.

Equation:

- a) Is your ellipse more horizontally or vertically stretched? Explain.
- b) What are the lengths of the major axis, semi-major axis, minor axis, and semi-minor axis?
- c) Graph the ellipse to the right.
- d) Fill in the blanks on the website until you are correct.

3) Go to <http://www.mathguide.com/cgi-bin/quizmasters/CSHyperbolas.cgi> and respond accordingly.

Equation:

- a) Is your hyperbola horizontal or vertical? Explain.
- b) Graph the hyperbola to the right.
- c) Fill in the blanks on the website until you are correct.
- d) Explain how the equation of the ellipse and the hyperbola are different.
- e) Determine the equations of the asymptotes.

4) Go to <http://www.mathguide.com/cgi-bin/quizmasters/CSircles.cgi> and respond accordingly.

Equation:

- a) The definition of a circle is (fill in the blank): "The set of all points that are _____ from a point in a plane."
- b) Sketch the circle to the right.
- c) Fill in the blanks on the website until you are correct.
- d) Imagine there is a new circle that has its center at $C(5,-6)$ and it is tangent either to the x-axis or the y-axis. Write the two possible equations that exist for this circumstance. (If you do not know what "tangent" means, watch the first minute of this video: <https://www.youtube.com/watch?v=-n1pzh81KA8> .)