Parabola

a. Draw a line across the bottom of the paper and label it the directrix
b. Fold the paper in half to create a line of symmetry
c. Make a point 4, 6, or 8 cm above the directrix on the line of symmetry. Label it the focus
d. Locate points that are equal distance from the point and the line. Place an x at each point.
One point is located on the line of symmetry half way between the focus and directrix.
Another point is located on a line parallel to the directrix and going through the focus.
e. Once a point is found fold the paper and use the line of symmetry to find another point on the opposite side.

A parabola is a locus of point equal distance from a point (the focus) and a line (the directrix).

P is the distance from the focus to the vertex
P is the distance from the vertex to the directrix
The length of the latus rectum is 4P

Directrix parallel to the x-axis, vertex is at (h,k)

$$(x-h)^2 = 4p(y-k)$$

Directrix parallel to the y axis, vertex is at (h,k)

$$(y-k)^2 = 4p(x-h)$$