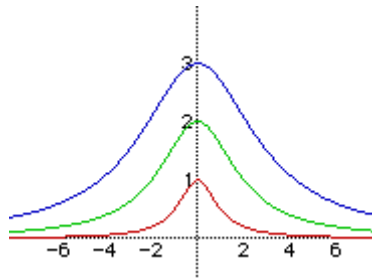# The Witch of Agnesi

The witch of Agnesi is a curve given by the equation $yx^2=a^2(a-y)$, where a is the diameter of the circle. The graph below illustrates the witch with different values of a.

A step-by-step description to the witch is as follows:

1.) There is a circle with a radius=a with center (0,a).

2.) There is a horizontal line **l** passing through (0,2a).

3.) Draw a line through the origin to any point **B** on the circle. Let the intersection of this secant line and line **l** be **P**.

4.) The Witch of Agnesi is the locus of intersections of a horizontal line passing through **B** and a vertical line passing through **P**.