Teacher Notes

Objective
- To find a rectangle that will produce the largest area given a fixed perimeter.

Ryan's Puppy Problem

This problem can be used in Geometry of Algebra. The perimeter can be any number you desire, but remember the length of the segment must fit on the screen.

The construction of the last two sides of the rectangle may be done differently without effecting the objective of the activity. Students should observe that the closer the rectangle approaches a square the larger the area.

The equation for the area could be written as: $y = \dfrac{x(8 - 2x)}{2}$, where 'x' represents the width of first side of the rectangle, and 'y' represents the area.