# Area in the Plane

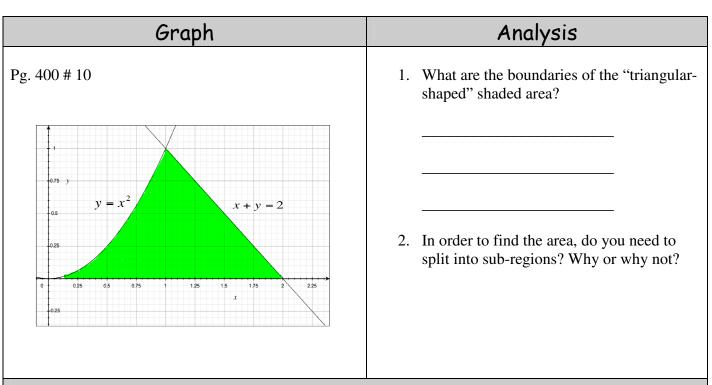| Graph | Analysis |
|---|---|
| Pg. 400 # 10 <br><br>  <br> $y = x^2$  $x + y = 2$ | 1. What are the boundaries of the "triangular-shaped" shaded area? <br><br> _____ <br><br> _____ <br><br> _____ <br><br> 2. In order to find the area, do you need to split into sub-regions? Why or why not? |

## Symbolic

1. Write an expression for the area of the strips you will be adding up.  (If the width is dx, the length must be in terms of x.  If the width is dy, the length must be in terms of y).

2. Find the limits of integration.  (If using dx, the limits are x values; if using dy, the limits are y values).

3. Integrate to find area.