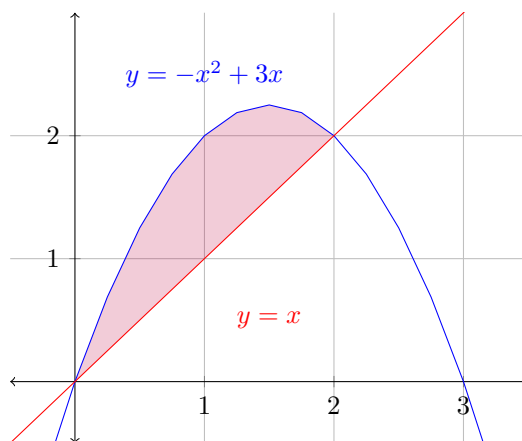Please show **all** your work! Answers without supporting work will not be given credit. Write answers in spaces provided.

Name:_____

1. [**5 pts**] Let R be the region shown below. Set up the integral that computes the **VOLUME** as R is rotated around the x-axis.

   DON'T COMPUTE IT!!!

$y = -x^2 + 3x$

$y = x$

Volume = _____

2. [**5 pts**] Set up the integral that computes the **VOLUME** of the region bounded by

$$y = \sqrt{4 - x}, \quad y = 0, \quad x = 0$$
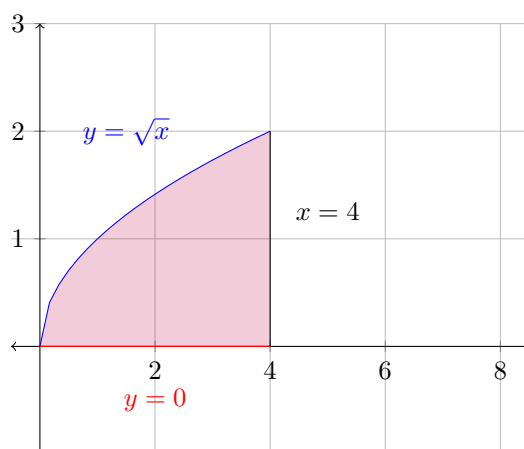
   around the y-axis.

   DON'T COMPUTE IT!!!

Volume = _____

Please show **all** your work! Answers without supporting work will not be given credit.
Write answers in spaces provided.

Name:

1. [**5 pts**] Let R be the region shown below. Set up the integral that computes the **VOLUME** as R is rotated around the $x = 4$.

   DON'T COMPUTE IT!!!

Volume = _____

2. [**5 pts**] Using the **SHELL METHOD**, set up the integral that computes the **VOLUME** of the region bounded by

$$x = y^2 - 2y - 8, \quad \text{and} \quad x = 0$$

   around the x-axis.

   DON'T COMPUTE IT!!!

Volume = _____