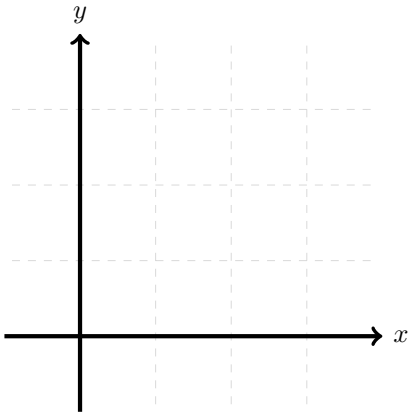
MA 114 Quiz 9 November 7, 2019

Answer all questions and show your work. Unsupported answers may receive *no credit*. You may not use a calculator on this quiz. Allow 15 minutes for the quiz.

Name: _____ Section: _____

1. (a) (2 points) Graph the functions $y = \sqrt[3]{x}$ and $y = x$ in the first quadrant. Where do these curves intersect?



What integrals calculate the volume of the solid given by rotating the region bounded by these curves around the y-axis? You do not need to integrate!

(b) (3 points) Use the disk/washer method.

(c) (3 points) Use the shell method.

2. (2 points) What integral computes the arc length of the curve

$$y = x^2$$

from $x = 1$ to $x = 4$? You do not need to integrate.