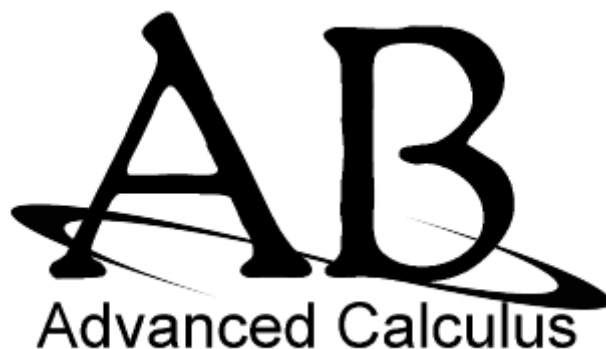




AB.Q403.REVIEW ASSESSMENT

(PART G)

AREA/VOLUME/PERIMETER

(20 points)

NO CALCULATORS

NAME:

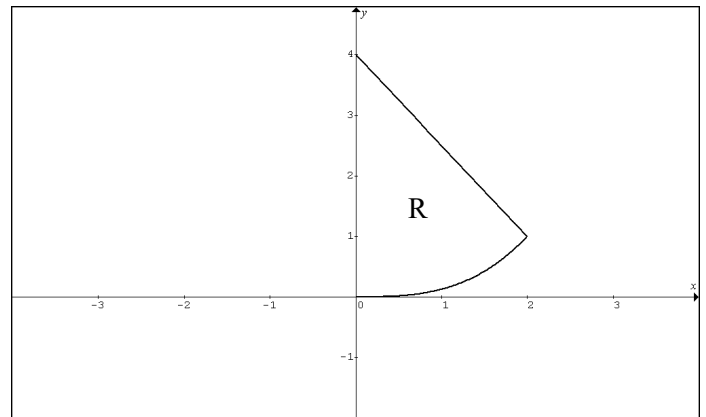
DATE:

BLOCK:

I (print name) certify that I wrote **all** marks made in this assessment. I did not write **anything** that I do not fully understand. I would now, having completed this assessment, be able to make similar (but equally accurate) responses if asked complete the same exact assessment on my own.

Signature:

1. Consider the region R, in the first quadrant, bounded by the graphs $y = \frac{x^3}{8}$ and $y = 4 - \frac{3}{2}x$ as shown in the figure.



- a) Find the volume of the solid if R is revolved about the x-axis
- b) Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid if R is revolved about the line $y = 8$.
- c) Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid if R is revolved about the line $y = -3$.
- d) Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid if R is revolved about the y-axis
- e) The base of a solid is the region R. Each cross section of the solid perpendicular to the **x-axis** is a rectangle with height of 7. Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid.
- f) The base of a solid is the region R. Each cross section of the solid perpendicular to the **x-axis** is a semi-circle. Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid.
- g) The base of a solid is the region R. Each cross section of the solid perpendicular to the **y-axis** is a square. Set up, but do not evaluate an expression involving one or more integral used to find the volume of the solid.
- h) Set up, but do not evaluate an expression involving one or more integral used to find the perimeter of the region R.

2. COMPLETE THE 2021 AP EXAMINATION PROBLEMS: 1, 2, 3, 4, 5, and 6

(THESE PROBLEMS ARE PART OF THE FINAL REVIEW ASSESSMENT)