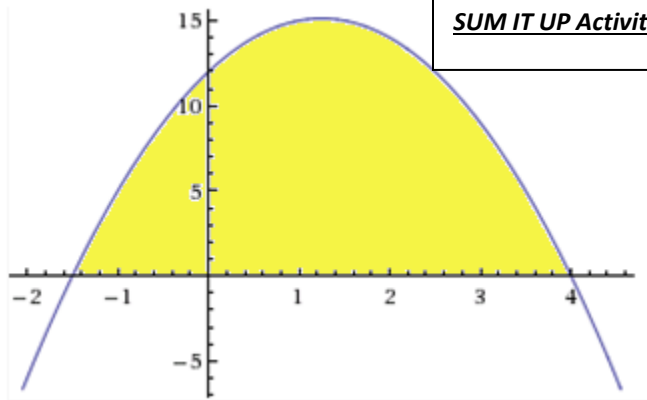


Presentation #158  
Review Strategies for AP Calculus  
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*SUM IT UP Activity with Area and Volume*

1)



$$f(x) = -(2x^2 - 5x - 12)$$

a) Find the area of the region bounded by  $f(x)$  and the  $x$  axis.

$A =$  \_\_\_\_\_

b) Find the volume by cross sections of equilateral triangles perpendicular to the  $x$  axis.

$V =$  \_\_\_\_\_

c) Find the volume of the region rotated about the  $x$  axis.

$V =$  \_\_\_\_\_

d) Find the volume of the region rotated about  $y = -2$

$V =$  \_\_\_\_\_

Total \_\_\_\_\_

Answer Sheet: Show your work!

Number	Work/Explanation	Answer

1. If  $y = x^2e^x$ , then  $\frac{dy}{dx} =$

(A)  $2xe^x$

(B)  $x(x + 2e^x)$

(C)  $xe^x(x + 2)$

(D)  $2x + e^x$

(E)  $2x + e$



**Answer Key—Read Straight across to be in correct order**

#1) C

#7) D

#10) C

#2) D

#8) B

#5) A

#3) A

#9) E

#4) E

#6) D

I use <http://zxing.appspot.com/generator> to create my codes.