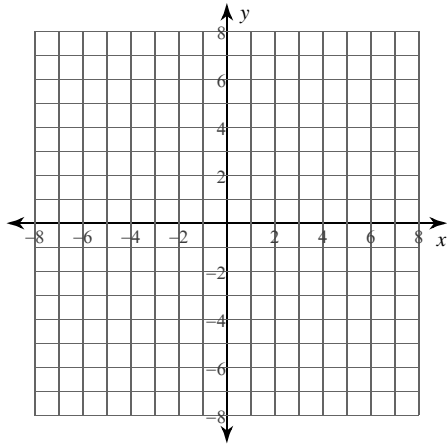


Calculus Practice: Using Definite Integrals to Calculate Volume 7a

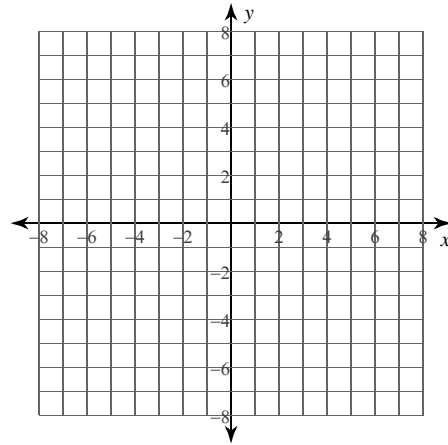
For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the given axis. You may use the provided graph to sketch the curves and shade the enclosed region.

1) $y = 2x$, $y = x^2$
Axis: $y = -2$



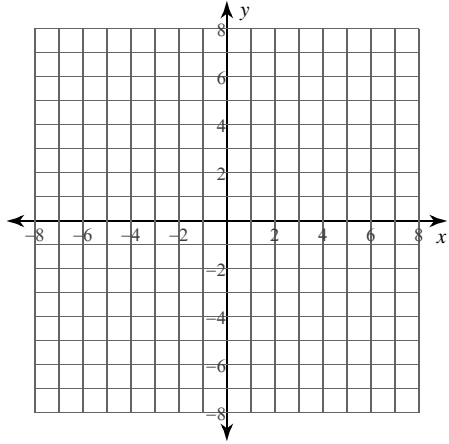
- A) $\frac{91}{10}\pi \approx 28.588$
 B) $\frac{38}{5}\pi \approx 23.876$
 C) $\frac{139}{15}\pi \approx 29.112$
 D) $\frac{48}{5}\pi \approx 30.159$

2) $y = -4$, $y = -x^2$, $x = 0$, $x = 2$
Axis: $y = 2$



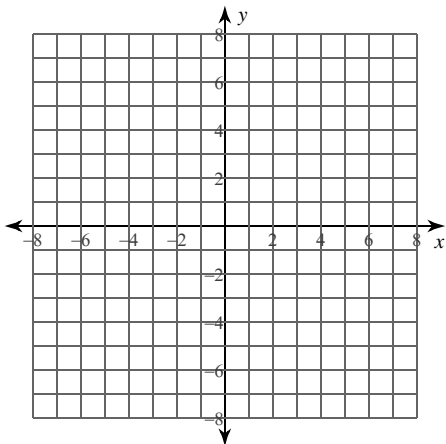
- A) $\frac{704}{15}\pi \approx 147.445$
 B) $\frac{734}{15}\pi \approx 153.729$
 C) $\frac{709}{15}\pi \approx 148.493$
 D) $\frac{1408}{15}\pi \approx 294.891$

3) $y = \sqrt{x} + 2$, $y = 2$, $x = 4$
 Axis: $y = -2$



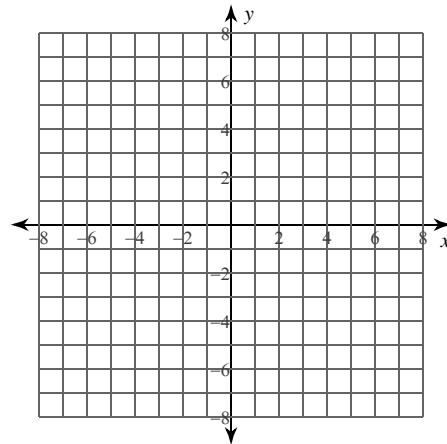
- A) $\frac{158}{3}\pi \approx 165.457$
- B) $\frac{146}{3}\pi \approx 152.891$
- C) $\frac{304}{3}\pi \approx 318.348$
- D) $\frac{152}{3}\pi \approx 159.174$

5) $x = \sqrt{y}$, $x = \frac{y}{2}$
 Axis: $x = -1$



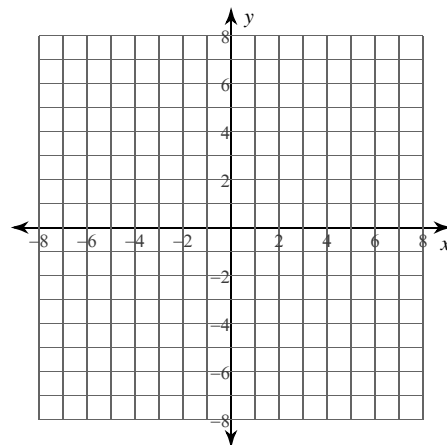
- A) $\frac{35}{6}\pi \approx 18.326$
- B) $16\pi \approx 50.265$
- C) $\frac{29}{6}\pi \approx 15.184$
- D) $\frac{16}{3}\pi \approx 16.755$

4) $x = -2$, $x = -y^2 - 1$
 Axis: $x = 1$



- A) $\frac{119}{15}\pi \approx 24.923$
- B) $\frac{104}{15}\pi \approx 21.782$
- C) $\frac{134}{15}\pi \approx 28.065$
- D) $\frac{89}{15}\pi \approx 18.64$

6) $x = y^2 - 2$, $x = \sqrt{y} - 2$
 Axis: $x = 2$

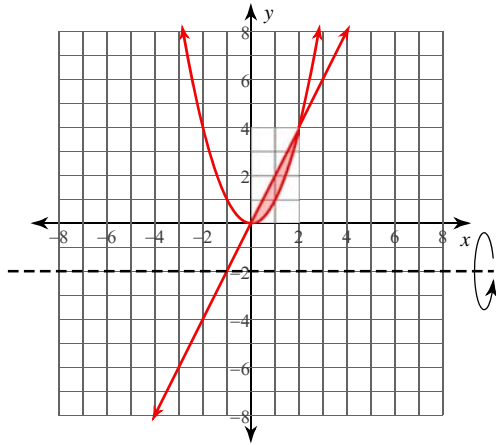


- A) $\frac{71}{30}\pi \approx 7.435$
- B) $\frac{71}{10}\pi \approx 22.305$
- C) $\frac{11}{30}\pi \approx 1.152$
- D) $\frac{131}{30}\pi \approx 13.718$

Calculus Practice: Using Definite Integrals to Calculate Volume 7a

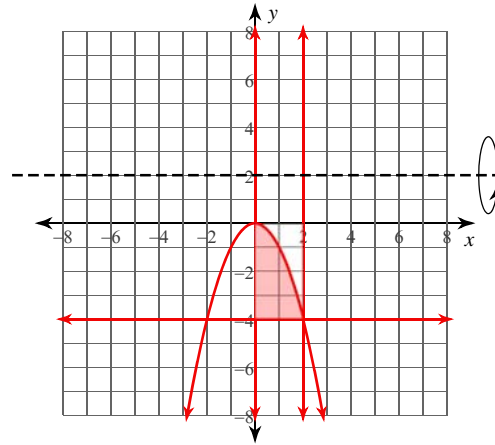
For each problem, find the volume of the solid that results when the region enclosed by the curves is revolved about the given axis. You may use the provided graph to sketch the curves and shade the enclosed region.

1) $y = 2x, y = x^2$
Axis: $y = -2$



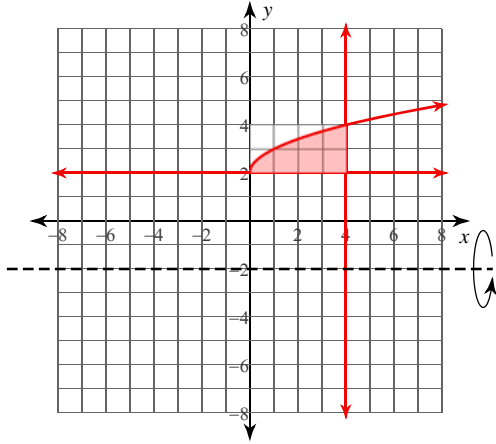
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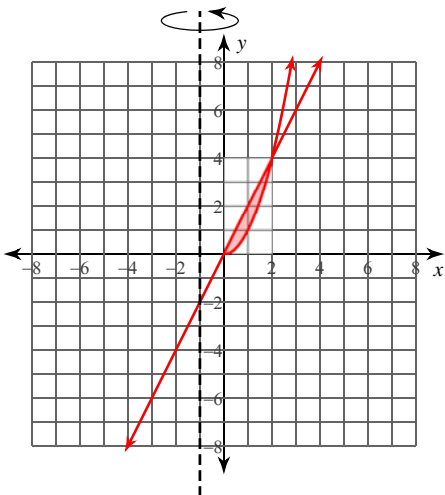
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- C) $\frac{709}{15}\pi \approx 148.493$
- D) $\frac{1408}{15}\pi \approx 294.891$

3) $y = \sqrt{x+2}$, $y = 2$, $x = 4$
 Axis: $y = -2$



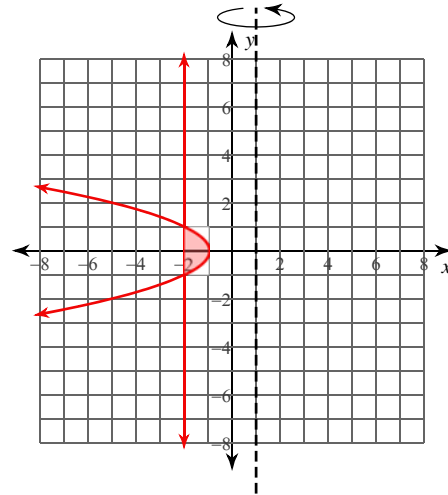
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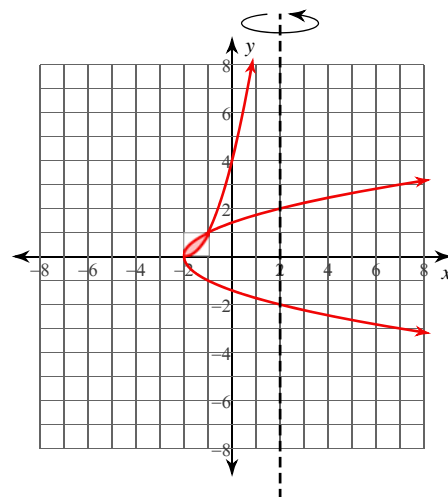
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