

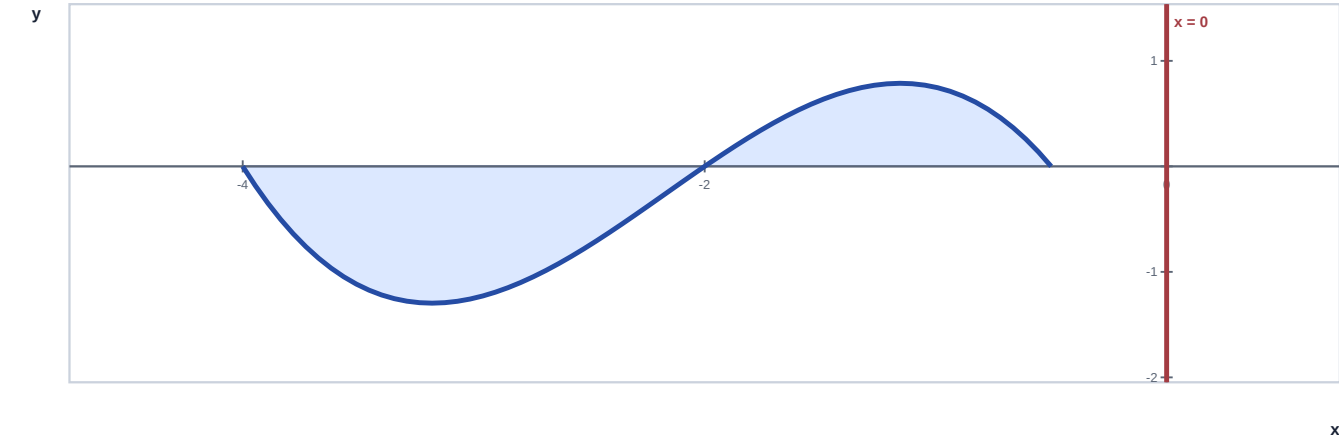
Volumes Using Cylindrical Shells

Use cylindrical shells to find each exact volume. Show radius, positive height, setup, and evaluation.

1. Rotate the shaded region about the vertical line $x = 0$.

$y = \frac{-1}{2} \cdot (x + 4) \cdot (x + 2) \cdot \left(x + \frac{1}{2}\right)$

Region: between this curve and $y = 0$ from $x = -4$ to $-1/2$.

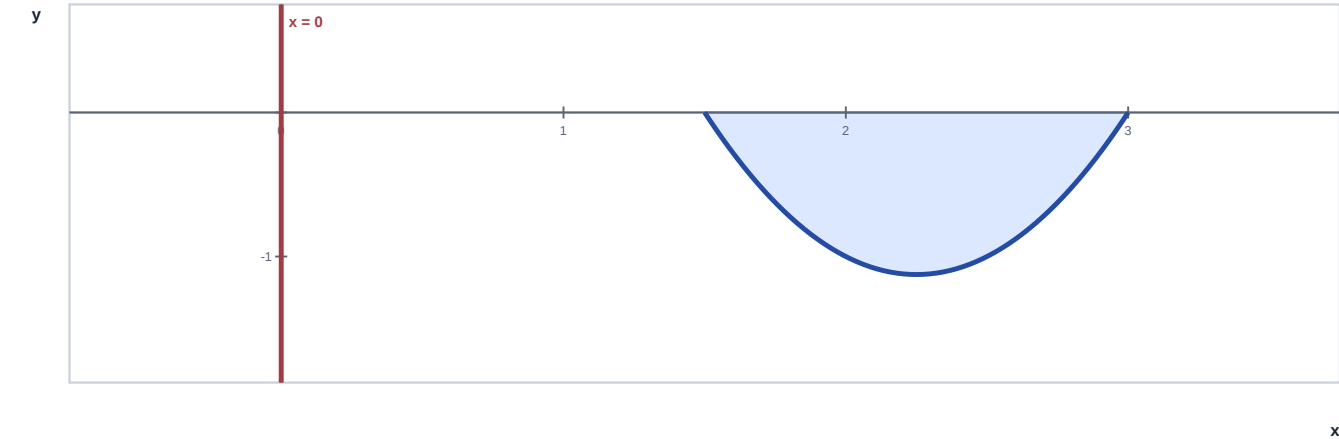


Show shell radius, positive height, setup, and exact volume:

2. Rotate the shaded region about the vertical line $x = 0$.

$y = 2 \cdot \left(x - \frac{3}{2}\right) \cdot (x - 3)$

Region: between this curve and $y = 0$ from $x = 3/2$ to 3 .



Show shell radius, positive height, setup, and exact volume:

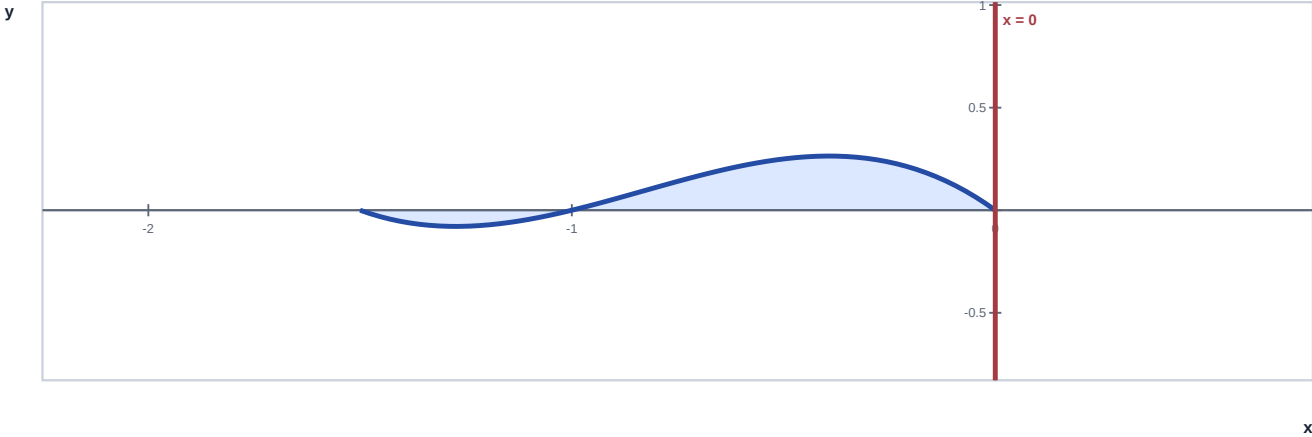
Volumes Using Cylindrical Shells

Use cylindrical shells to find each exact volume. Show radius, positive height, setup, and evaluation.

3. Rotate the shaded region about the vertical line $x = 0$.

$y = -1 \cdot \left(x + \frac{3}{2}\right) \cdot (x + 1) \cdot (x + 0)$

Region: between this curve and $y = 0$ from $x = -3/2$ to 0 .



Show shell radius, positive height, setup, and exact volume:

4. Rotate the shaded region about the vertical line $x = 0$.

$y = \frac{1}{2} \cdot \left(x - \frac{3}{2}\right) \cdot (x - 4)$

Region: between this curve and $y = 0$ from $x = 3/2$ to 4 .



Show shell radius, positive height, setup, and exact volume:
