

Find the volume:

1. region between $y = 3x - x^2$ and $y = x$; rotated about the x-axis

2. region between $y = x^2$ and $y = 4$; rotated about the x-axis

3. region between $y = x^2$ and $x = 3$ and $y = 0$; rotated about the y-axis

4. region between $y = x^2$ and $x = 3$ and $y = 0$; rotated about the x-axis

5. Think about: region between $y = 3x - x^2$ and $y = x$; rotated about the y-axis