

Area

Directions: Answer the questions.

1. Find the area of the region between the x-axis and $y = x^3 - 1$ from $x = 1$ to $x = 2$
2. Find the area of the regions between the x-axis and $y = 2x^2 - x - 3$ from $x = -2$ to $x = 2$
3. Find the area of the regions enclosed between the curves $y = x^4 - 4x^2 + 4$ and $y = x^2$
4. Find the area of the region enclosed by $x = y + 2$ and $x = y^2$
5. Find the area of the region enclosed by $y = 2 \sin(x)$, $y = \sin(2x)$, $x = 0$, and $x = \pi$
6. Find the area of the region in the first quadrant bounded by the line $y = x$, the line $x = 2$, the curve $y = \frac{1}{x^2}$, and the x-axis.
7. Find the area of the region in the first quadrant bounded on the left by the y-axis and on the right by $y = \sin(x)$, $y = \cos(x)$, and their first intersection point in the first quadrant.
8. Find the area of the region in the first quadrant bounded on the left by the y-axis, below by the line $y = \frac{x}{4}$, above left by the curve $y = 1 + \sqrt{x}$, and above on the right by the curve $y = \frac{2}{\sqrt{x}}$.