

Area under a curve

Find the total area (treat all areas as positive) bound by $f(x)$ the x -axis and the given interval. Sketch each graph, then show all integral set ups and take each integral. (Do not integrate #3 & #7-Use Math 9)

1. $f(x) = -x^2 + 4$ A) $[0, 5]$ B) $[-2, 2]$ C) $[2, 5]$

2. $f(x) = x^3 - 6x^2 + 5x$ A) $[1, 5]$ B) $[-1, 7]$

3. $f(x) = \frac{3x+12}{x^2}$ A) $[-9, -1]$ B) $[2, 5]$

4. $f(x) = \sin(2x)$ A) $\left[-\pi, \frac{-\pi}{4}\right]$ B) $[-\pi, 0]$

5. $f(x) = x^3 - x^2 - 6x$ A) $[-3, 5]$ B) $[0, 4]$

6. $f(x) = \cos x$ A) $\left[0, \frac{3\pi}{2}\right]$ B) $\left[\frac{-\pi}{2}, \frac{3\pi}{2}\right]$

7. $f(x) = \frac{9x}{2x^2 - 6}$ A) $[-1.5, 1.5]$ B) $[-8, -3]$