

Critical Points

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

Determine all critical points for the function.

- 1) $f(x) = x^2 + 16x + 64$ 1) _____
A) $x = 0$ B) $x = 8$ C) $x = -16$ D) $x = -8$
- 2) $f(x) = x^2 + 4x + 4$ 2) _____
A) $x = -4$ B) $x = 2$ C) $x = 0$ D) $x = -2$
- 3) $f(x) = x^3 - 12x - 5$ 3) _____
A) $x = -2, x = 0, \text{ and } x = 2$ B) $x = -2 \text{ and } x = 2$
C) $x = 2$ D) $x = -2$
- 4) $f(x) = x^3 - 6x^2 + 4$ 4) _____
A) $x = 0 \text{ and } x = 4$ B) $x = -2 \text{ and } x = 2$
C) $x = 0$ D) $x = 0 \text{ and } x = 2$
- 5) $f(x) = 20x^3 - 3x^5$ 5) _____
A) $x = -2 \text{ and } x = 2$ B) $x = 2$
C) $x = 0, x = -2, \text{ and } x = 2$ D) $x = -2$
- 6) $f(x) = (x - 4)^3$ 6) _____
A) $x = 0 \text{ and } x = 4$ B) $x = 0, x = 4, \text{ and } x = 3$
C) $x = 4 \text{ and } x = 3$ D) $x = 4$
- 7) $f(x) = (x - 10)^5$ 7) _____
A) $x = 0 \text{ and } x = 10$ B) $x = 10$
C) $x = 0, x = 10, \text{ and } x = 5$ D) $x = 10 \text{ and } x = 5$
- 8) $f(x) = (x - 6)^3$ 8) _____
A) $x = 6 \text{ and } x = 3$ B) $x = 0, x = 6, \text{ and } x = 3$
C) $x = 0 \text{ and } x = 6$ D) $x = 6$
- 9) $y = 2x^2 - 64\sqrt{x}$ 9) _____
A) $x = 0$ B) $x = 0 \text{ and } x = 4$
C) $x = 0, x = 4, \text{ and } x = -4$ D) $x = 4$
- 10) $y = 3x^2 - 96\sqrt{x}$ 10) _____
A) $x = 0, x = 4, \text{ and } x = -4$ B) $x = 4$
C) $x = 0 \text{ and } x = 4$ D) $x = 0$
- 11) $f(x) = 80x^3 - 3x^5$ 11) _____
A) $x = 4$ B) $x = -4$
C) $x = 0, x = -4, \text{ and } x = 4$ D) $x = -4 \text{ and } x = 4$

Answer Key

Testname: CRITICAL POINTS

- 1) D
- 2) D
- 3) B
- 4) A
- 5) C
- 6) D
- 7) B
- 8) D
- 9) B
- 10) C
- 11) C