

Test for Concavity M/C Practice

1. If $f''(x) = (x - 1)(x + 2)^3(x - 4)^2$, then the graph of f has inflection points when $x =$
- (A) -2 only
 - (B) 1 only
 - (C) 1 and 4 only
 - (D) -2 and 1 only
 - (E) -2 , 1 , and 4 only
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2. The function $f(x) = xe^x$ has inflection points at:
- (A) -2
 - (B) -1
 - (C) 0
 - (D) 1
 - (E) There are no inflection point of f .
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3. The number of inflection points of $f(x) = 3x^7 - 10x^5$ is:
- (A) 0
 - (B) 1
 - (C) 2
 - (D) 3
 - (E) 5
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4. For which of the following intervals is the graph of $y = x^4 - 2x^3 - 12x^2$ concave down?
- (A) $(-2, 1)$
 - (B) $(-1, 2)$
 - (C) $(-2, -1)$
 - (D) $(-\infty, -1)$
 - (E) $(-1, \infty)$