

Choose the correct answer of the following questions:

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| (1) | The critical numbers of the function $f(x) = x^3 - 6x^2 + 9x + 2$ are: | | | |
| | (A) -4,0,4 | (B) -1,-3 | (C) 1,3 | (D) -2,0,2 |
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| (2) | The function $f(x) = x^3 - 6x^2 + 9x + 2$ is increasing on: | | | |
| | (A) $(-\infty, 1) \cup (3, \infty)$ | (B) (1,3) | (C) (3, ∞) | (D) (1,2) \cup (2, ∞) |
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| (3) | The function $f(x) = x^3 - 6x^2 + 9x + 2$ is decreasing on: | | | |
| | (A) $(-\infty, 1) \cup (3, \infty)$ | (B) (1,3) | (C) (3, ∞) | (D) (1,2) \cup (2, ∞) |
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| (4) | The function $f(x) = x^3 - 6x^2 + 9x + 2$ has a local maximum value at | | | |
| | (A) $x = 3$ | (B) $x = -1$ | (C) $x = -3$ | (D) $x = 1$ |
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| (5) | The function $f(x) = x^3 - 6x^2 + 9x + 2$ has a local minimum value at | | | |
| | (A) $x = -1$ | (B) $x = 2$ | (C) $x = 3$ | (D) $x = -2$ |
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| (6) | The graph of the function $f(x) = x^3 - 6x^2 + 9x + 2$ is concave upward on: | | | |
| | (A) (2, ∞) | (B) (-2, ∞) | (C) $(-\infty, 2)$ | (D) (0, ∞) |
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| (7) | The graph of the function $f(x) = x^3 - 6x^2 + 9x + 2$ is concave downward on: | | | |
| | (A) (2, ∞) | (B) (-2, ∞) | (C) $(-\infty, 2)$ | (D) (0, ∞) |
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| (8) | The graph of the function $f(x) = x^3 - 6x^2 + 9x + 2$ has an inflection point at: | | | |
| | (A) (2,24) | (B) (4,2) | (C) (0,0) | (D) (2,4) |
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| (9) | If f has a local maximum or minimum at c , then c is a critical number of f . | | | |
| | (A) True | (B) False | | |
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