CONCAVITY, SECOND DERIVATIVE, AND CURVE SKETCHING - PRACTICE TEST | NEW BRUNSWICK CALCULUS 120 · UNIT D · 10 QUESTIONS

Concavity, Second Derivative, and Curve Sketching — Practice Test

This practice test was made by AI and there may be mistakes. If a question or answer looks wrong, use the Flag a mistake button to let Brett know so he can fix it.

1 **For $f(x) = x^4$, the second derivative at $x = 4$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

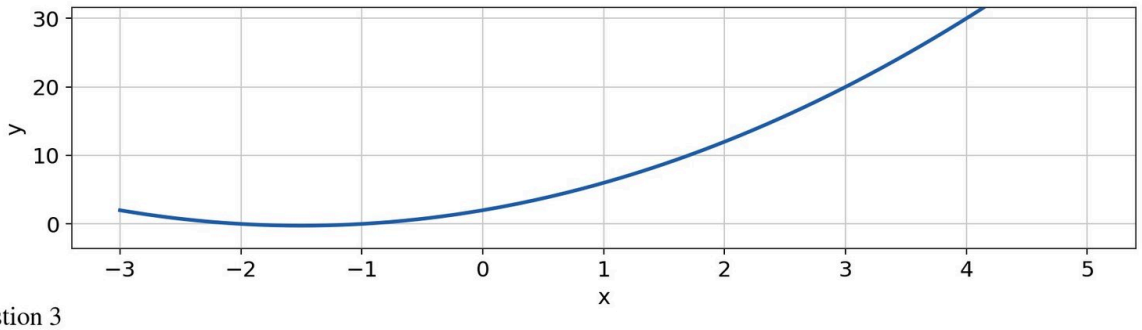
2 **For $f(x) = x^3 + x$, the second derivative at $x = 1$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

3

The graph shows a quadratic function. One x -intercept is -1. The other x -intercept is



Question 3

The graph shows a quadratic function. One x −intercept is -1. The other x −intercept is

ANSWER

Understand It with Pulse

Flag a mistake

4 For f(x) = -x³ , the graph is concave up when x is

Question 4

For $f(x) = -x^3$, *the* graph *is* concave *up* when *x is*

A) less than 0

B) greater than 0

C) equal to 0

D) always concave down

- A less than 0
- B greater than 0
- C equal to 0
- D always concave down

Understand It with Pulse | Flag a mistake

5 For f(x) = x⁴ , the second derivative at x = 5 is

ANSWER _____

Understand It with Pulse | Flag a mistake

6 For f(x) = x³ - 2x , the second derivative at x = 1 is

ANSWER _____

Understand It with Pulse | Flag a mistake

7 **For $f(x) = x^2 + 4x + 1$, the value of f at x = 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **For $f(x) = x^4$, the second derivative at x = 6 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **For $f(x) = x^3 - 3x$, the second derivative at x = 1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **For $f(x) = x^2 + 5x + 4$, the value of f at x = 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	192	**5.**	300	**9.**	6
2.	6	**6.**	6	**10.**	18
3.	-2	**7.**	13		
4.	A	**8.**	432		

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