DERIVATIVES: POLYNOMIAL AND TRIGONOMETRIC FUNCTIONS, PRODUCT, QUOTIENT, AND CHAIN RULES - PRACTICE TEST | NEW BRUNSWICK CALCULUS 120 · UNIT A · 25 QUESTIONS

Derivatives: Polynomial and Trigonometric Functions, Product, Quotient, and Chain Rules — 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 $f(x) = x^2$, the derivative $f'(x)$ at $x = 2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **For $f(x) = x^4$, the derivative $f'(x)$ at $x = 2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The derivative of x^8 at x = 1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **For $f(x) = x^3$, the slope of the tangent at x = 2 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

6 **The value of the derivative of x^5 when x = 1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

8 **For $f(x) = 2x^2 + 5x$, the derivative at $x = 1$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **For $f(x) = 4x^2 + 1x$, the derivative at $x = 1$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

10 **The derivative of $4x^3 + 2x$ at $x = 1$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

11 **For $f(x) = x^2 - 3x + 2$, the value of $f'(2)$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

12 **The slope of $y = 2x^2 + x$ at $x = 3$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **For f(x) = 2 sin x , the derivative at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **For f(x) = 3 sin x , the derivative at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **For f(x) = 4 sin x , the derivative at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **The derivative of 3 sin x at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **For f(x) = sin x + cos x , the value of f'(0) is**

ANSWER _____

Understand It with Pulse | Flag a mistake

18 **The rate of change of sin x at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

19 **For f(x) = 2 cos x , the derivative at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

20 For f(x) = 3 cos x , the derivative at x = 0 is

ANSWER

Understand It with Pulse | Flag a mistake

21 For f(x) = 4 cos x , the derivative at x = 0 is

ANSWER

Understand It with Pulse | Flag a mistake

22 The derivative of 2 cos x at x = 0 is

ANSWER

Understand It with Pulse | Flag a mistake

23 For f(x) = cos x - sin x , the value of f'(0) is

ANSWER

Understand It with Pulse | Flag a mistake

24 **The slope of the tangent to y = cos x at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **For f(x) = 2xx³ , the derivative at x = 1 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	4	**10.**	14	**19.**	0
2.	12	**11.**	1	**20.**	0
3.	32	**12.**	13	**21.**	0
4.	8	**13.**	2	**22.**	0
5.	12	**14.**	3	**23.**	-1
6.	5	**15.**	4	**24.**	0
7.	8	**16.**	3	**25.**	8
8.	9	**17.**	1		
9.	9	**18.**	1		

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