PRINCE EDWARD ISLAND CALCULUS 12 · UNIT B

Derivatives — Practice Test

Prince Edward Island Calculus 12 • 25 questions

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 **The derivative of x^3 at $x = 2$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

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

ANSWER _____

Understand It with Pulse | Flag a mistake

3 **The derivative of x^2 at $x = 3$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

4 **The derivative of x^5 at x = 2 is**

ANSWER _____

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5 **The derivative of $2x^2 + 3x$ at x = 2 is**

ANSWER _____

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

ANSWER _____

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7 **The derivative of $1x^2 + 5x$ at x = 4 is**

ANSWER _____

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8 **The derivative of sine x at x = 0 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **The derivative of e^x at x = 0 is**

ANSWER _____

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10 **The derivative of the natural log of x at x = 2 as a decimal is**

ANSWER _____

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11 **The derivative measures**

A instantaneous rate of change

B average rate over an interval

C area under a curve

D total change only

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12 **The derivative of a constant function is**

A 1

B the constant

C x

D 0

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13 **The power rule says the derivative of x^n is**

- A $n \times x^n$
- B x^n / n
- C $n \times x^n - 1$
- D $x^n + 1$

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14 **The product rule is used to differentiate**

- A an inverse function
- B a product of two functions
- C a sum of two functions
- D a composite function

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15 **The chain rule is used to differentiate**

A a composite function

B a product of two functions

C a quotient only

D a constant

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16 **The quotient rule is used to differentiate**

A a sum of two functions

B a composite function

C a power only

D a quotient of two functions

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17 **A function is not differentiable at a**

A maximum point

B zero of the function

C sharp corner

D smooth point

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18 **The second derivative measures**

A the function value

B concavity and acceleration

C area

D slope of the original graph only

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19 **The derivative of 5x at any x is**

ANSWER

Understand It with Pulse | Flag a mistake

20 **The derivative of $x^2 + 3x$ at x = 0 is**

ANSWER

Understand It with Pulse | Flag a mistake

21 **The derivative of x^3 at x = 2 is**

ANSWER

Understand It with Pulse | Flag a mistake

22 **The derivative of $2x^3$ at x = 1 is**

ANSWER

Understand It with Pulse | Flag a mistake

23 The derivative of x^6 at $x = 1$ is

ANSWER _____

Understand It with Pulse | Flag a mistake

24 The slope of the tangent to $y = x^2$ at $x = 4$ is

ANSWER _____

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25 The derivative of $x^2 - x$ at $x = 3$ is

ANSWER _____

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	12	**10.**	0.5	**19.**	5
2.	4	**11.**	A	**20.**	3
3.	6	**12.**	D	**21.**	12
4.	80	**13.**	C	**22.**	6
5.	11	**14.**	B	**23.**	6
6.	7	**15.**	A	**24.**	8
7.	13	**16.**	D	**25.**	5
8.	1	**17.**	C		
9.	1	**18.**	B		

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