NOVA SCOTIA CALCULUS 12 · UNIT C · 25 QUESTIONS

Differentiation of Exponential, Logarithmic and Trigonometric Functions — 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 **Find the derivative at x = 0 of 2sin of 3x .**

ANSWER _____

Understand It with Pulse | Flag a mistake

2 **Find the derivative at x = 0 of 3sin of 2x .**

ANSWER _____

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3 **Find the derivative at x = 0 of 1sin of 4x .**

ANSWER _____

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4 **Find the derivative at x = 0 of 4sin of 1x .**

ANSWER _____

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5 **Find the derivative at x = 0 of 2sin of 2x .**

ANSWER

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6 **Find the derivative at x = 0 of 5sin of 2x .**

ANSWER

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7 **Find the derivative at x = 0 of 3sin of 3x .**

ANSWER

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8 **Find the derivative at x = 0 of 1sin of 5x .**

ANSWER

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9 **Find the derivative at x = 0 of 2sin of 4x .**

ANSWER

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10 **Find the derivative at x = 0 of 4sin of 3x .**

ANSWER

Understand It with Pulse | Flag a mistake

11 **Find the derivative at x = 0 of 3sin of 1x .**

ANSWER

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12 **Find the derivative at x = 0 of 5sin of 1x .**

ANSWER

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13 **Find the derivative at x = 0 of 2sin of 5x .**

ANSWER _____

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14 **Find the derivative at x = 0 of 1sin of 2x .**

ANSWER _____

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15 **The derivative of e^x is**

A e^x

B $x \times e^x$

C e^x / x

D 1

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16 **The derivative of sin x is**

A -sin x

B cos x

C -cos x

D tan x

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17 **The derivative of cos x is**

A sin x

B cos x

C -sin x

D sec x

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18 **The derivative of ln x is**

A x

B ln x

C e^x

D 1 ÷ x

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19 **The derivative of tan x is**

A $\sec^2 x$

B $\cos^2 x$

C sin x

D 1 ÷ cos x

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20 **The chain rule gives the derivative of e^{2x} as**

- A e^{2x}
- B $2\ e^{2x}$
- C $2x\ e^{2x}$
- D e^{x}

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21 **The derivative of log base 10 of x is**

- A $1 \div x$
- B $10 \div x$
- C $1 \div x \ln 10$
- D $\ln x$

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22 **The derivative of sin 3x is**

- **A** cos 3x
- **B** 3 sin 3x
- **C** -3 cos 3x
- **D** 3 cos 3x

Understand It with Pulse | Flag a mistake

23 **The derivative of 2^x is**

- **A** $2^x \times \ln 2$
- **B** $x \times 2^x$
- **C** $2^x / \ln 2$
- **D** $\ln 2$

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24 **The derivative of $x \times e^x$ needs**

- A the quotient rule only
- B the product rule
- C the power rule only
- D no rule

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25 **The derivative of ln of 5x is**

- A $5 \div x$
- B ln 5
- C $1 \div x$
- D 5

Understand It with Pulse | Flag a mistake

ANSWER KEY

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

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