NOVA SCOTIA CALCULUS 12 · UNIT C · 10 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 4sin of 4x .**

ANSWER

Understand It with Pulse | Flag a mistake

2 **Find the derivative at x = 0 of 3sin of 5x .**

ANSWER

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

ANSWER

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4 **The derivative of cos 2x is**

- **A** -2 sin 2x
- **B** 2 sin 2x
- **C** -sin 2x
- **D** 2 cos 2x

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5 **The derivative of $e^{-}x$ is**

- **A** $e^{-}x$
- **B** negative $e^{-}x$
- **C** x $e^{-}x$
- **D** 0

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6 **The derivative of $\sin^2 x$ uses**

A the quotient rule only

B the sum rule only

C the chain rule

D no rule

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7 **The derivative of tan x can also be written as**

A $\sin^2 x$

B $\cos^2 x$

C $-\sec x$

D $1 \div \cos^2 x$

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8 **If f is differentiable and c is a constant, what is the derivative of c f(x)?**

- A c f'(x)
- B f'(x)
- C 0
- D c^2 f'(x)

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9 **The derivative of ln(x^2) , for x greater than 0, is**

- A 1 ÷ x
- B 2 ÷ x
- C 2x
- D x

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10 **The derivative of $e^x + \sin x$ is**

- **A** $e^x - \cos x$
- **B** $x\, e^x + \sin x$
- **C** $e^x + \cos x$
- **D** cos x only

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ANSWER KEY

1. 16
2. 15
3. 12
4. A
5. B
6. C
7. D
8. A
9. B
10. C

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