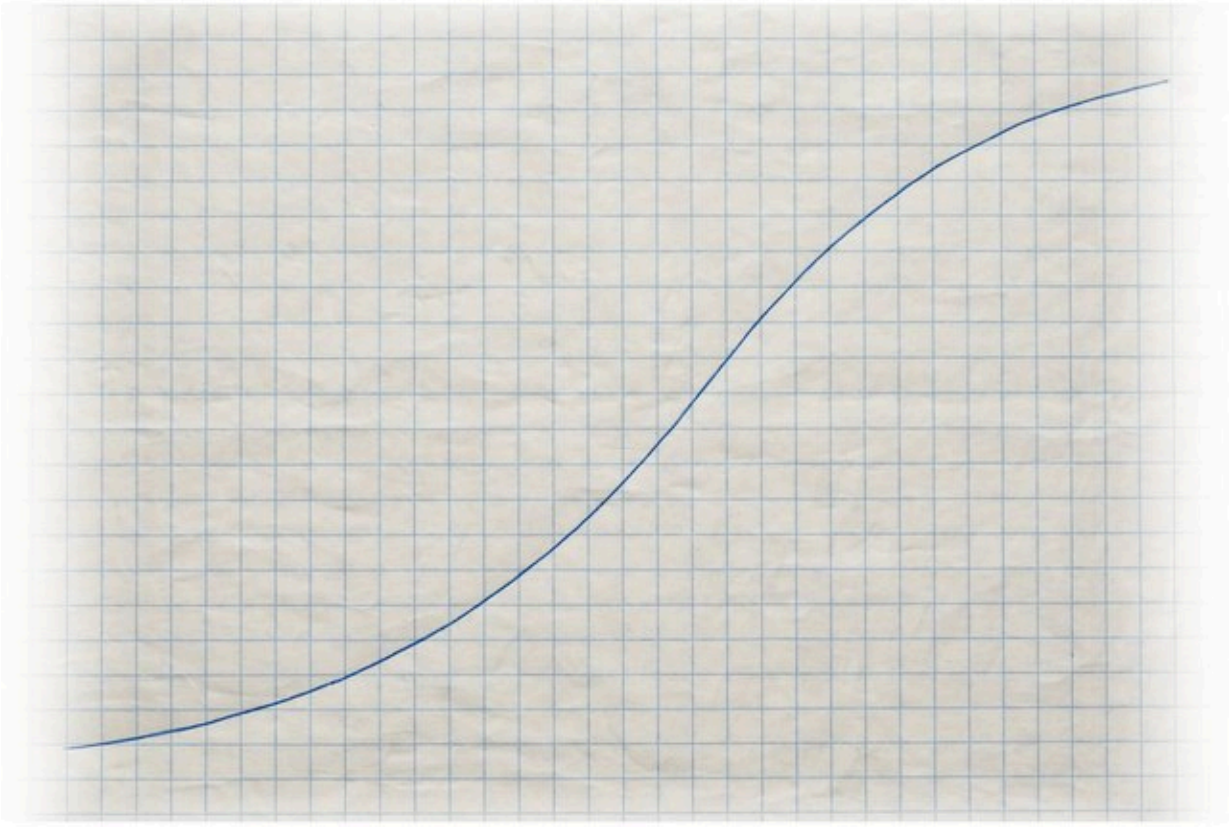
NOVA SCOTIA CALCULUS 12 · UNIT B · 10 QUESTIONS

Differentiation of Polynomial and Algebraic 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 = 2 of $1x^2$.**



ANSWER

Understand It with Pulse | Flag a mistake

2 **Find the derivative at x = 2 of $3x^5$.**

ANSWER _____

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3 **Find the derivative at x = 2 of $2x^6$.**

ANSWER _____

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4 **If $f(x) = x^4$, then $f'(2) = 32$ because**

A $4 \times 2^3 = 32$

B $2^4 = 16$

C $4 + 2^3 = 12$

D $24 = 8$

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5

The second derivative measures

A the area under a curve

B how the slope is changing

C the function value

D the x intercept

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6 **A function with derivative zero at a point may have**



A always a maximum

B always a minimum

C a maximum, minimum, or neither

D no value there

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7 **The derivative of $5x^3$ is**

- A $5x^2$
- B $15x$
- C $3x^2$
- D $15x^2$

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8 **Differentiating term by term is allowed because the derivative of a sum is**

- A the sum of derivatives
- B the product of derivatives
- C the quotient of derivatives
- D zero

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9 **The derivative of x is**

- A 0
- B 1
- C x
- D 2

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10 **For $f(x) = 2x^2 + 3$, $f'(x)$ is**

- A $2x + 3$
- B $4x + 3$
- C $4x$
- D $2x$

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ANSWER KEY

1. 4
2. 240
3. 384
4. A
5. B
6. C
7. D
8. A
9. B
10. C

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