NOVA SCOTIA CALCULUS 12 · UNIT A · 25 QUESTIONS

Limits and Continuity — 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 limit as x approaches 2 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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2 **Find the limit as x approaches 3 of $x^2 + 2x$, giving a whole number .**

ANSWER _____

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3 **Find the limit as x approaches 4 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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4 **Find the limit as x approaches 1 of $x^2 + 3x$, giving a whole number .**

ANSWER _____

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5 **Find the limit as x approaches 5 of $x^2 + 2x$, giving a whole number .**

ANSWER _____

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6 **Find the limit as x approaches 2 of $x^2 + 3x$, giving a whole number .**

ANSWER _____

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7 **Find the limit as x approaches 6 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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8 **Find the limit as x approaches 3 of $x^2 + 4x$, giving a whole number .**

ANSWER _____

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9 **Find the limit as x approaches 4 of $x^2 + 3x$, giving a whole number .**

ANSWER _____

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10 **Find the limit as x approaches 7 of $x^2 + 2x$, giving a whole number .**

ANSWER _____

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11 **Find the limit as x approaches 2 of $x^2 + 5x$, giving a whole number .**

ANSWER _____

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12 **Find the limit as x approaches 5 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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13 **Find the limit as x approaches 8 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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14 **Find the limit as x approaches 3 of $x^2 + 1x$, giving a whole number .**

ANSWER _____

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15 **A limit describes the value a function gets close to as x gets close to**

A a number

B a maximum

C an average

D a derivative

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16 **If a function is continuous at x equals a, then the limit as x approaches a equals**

A zero

B the function value at a

C the derivative at a

D infinity

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17 **The limit as x approaches 2 of $x^2 + 1$ is best found by**

A graphing only

B long division

C direct substitution

D guessing

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18 **A function has a removable discontinuity at a point where**

- A the function is smooth
- B the slope is zero
- C the value is infinite
- D a hole can be filled by one value

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19 **The limit as x approaches 0 of sin $\frac{x}{x}$ equals**

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

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20 **One sided limits must agree for a two sided limit to**

A be zero

B exist

C be infinite

D be a derivative

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21 **A vertical asymptote can make a limit**

A always zero

B always one

C infinite or undefined

D a whole number

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22 **The limit as x approaches 3 of 2x minus 1 is an example of**

A the squeeze theorem

B implicit differentiation

C the chain rule

D direct substitution

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23 **Continuity on a closed interval requires the function to be defined and**

A limits to match function values

B always increasing

C always positive

D a straight line

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24 **The intermediate value theorem guarantees, for a continuous function,**

A a maximum exists

B a value between two output values is taken

C a derivative is zero

D a limit is infinite

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25 **A jump discontinuity has**

A equal left and right limits

B no graph

C different left and right limits

D a hole only

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	6	**10.**	63	**19.**	A
2.	15	**11.**	14	**20.**	B
3.	20	**12.**	30	**21.**	C
4.	4	**13.**	72	**22.**	D
5.	35	**14.**	12	**23.**	A
6.	10	**15.**	A	**24.**	B
7.	42	**16.**	B	**25.**	C
8.	21	**17.**	C		
9.	28	**18.**	D		

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