MATHEMATICS 3201 · NEWFOUNDLAND AND LABRADOR

Mathematics 3201

Practice Test

Unit E: Exponential, Logarithmic and Trigonometric Functions

25 Questions

Original practice test based on the Newfoundland and Labrador curriculum. Work through each question, then check your answers at the end.

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.

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Question 1

$\log_2 64$ is

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Question 2

$\log_3 27$ is

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Question 3

$\log_{10} 100$ is

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Question 4

$2^x = 8$. The value of x is

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Question 5

$5^x = 125$. The value of x is

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Question 6

A population of 800 grows at 3 percent per year. After 4 years it is, to two decimal places

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Question 7

A population of 1200 grows at 5 percent per year. After 3 years it is, to two decimal places

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Question 8

In a right triangle with legs 3 and 4 , sin of the angle opposite the side of length 3 is

A) $\frac{3}{5}$

B) $\frac{4}{5}$

C) $\frac{3}{4}$

D) $\frac{5}{3}$

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Question 9

In a right triangle with legs 5 and 12 , sin of the angle opposite the side of length 5 is

A) $\frac{12}{13}$

B) $\frac{5}{13}$

C) $\frac{5}{12}$

D) $\frac{13}{5}$

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Question 10

In a right triangle with legs 6 and 8 , sin of the angle opposite the side of length 6 is

A) $\frac{8}{10}$

B) $\frac{6}{8}$

C) $\frac{6}{10}$

D) $\frac{10}{6}$

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Question 11

A right triangle has legs 3 and 4 . Its hypotenuse is

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Question 12

A right triangle has legs 5 and 12 . Its hypotenuse is

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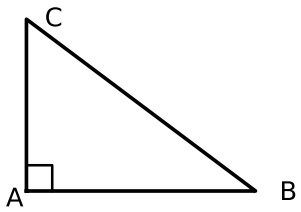

Question 13

The right triangle shown has legs 3 units and 4 units. Its hypotenuse is

A) 5

B) 6

C) 7

D) 3

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Question 14

A tower casts a shadow and the angle of elevation of the sun is 45°. If the shadow is 30 metres long, the tower height is, in metres

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Question 15

A tower casts a shadow and the angle of elevation of the sun is 45°. If the shadow is 45 metres long, the tower height is, in metres

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Question 16

The amplitude of $y = 2 \sin x + 3$ is

A) 3

B) 2

C) 1

D) 5

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Question 17

The amplitude of $y = 3 \sin x + 1$ is

A) 1

B) 3

C) 2

D) 4

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Question 18

The period of $y = \cos(2x)$ is

A) π

B) 2π

C) $\frac{\pi}{2}$

D) $\frac{2\pi}{3}$

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Question 19

The period of $y = \cos(3x)$ is

A) 2π

B) $\frac{2\pi}{3}$

C) $\frac{\pi}{2}$

D) π

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Question 20

The domain of $f(x) = \log(x - 4)$ is

A) $x > 4$

B) $x \geq 4$

C) $x < 4$

D) $x \neq 4$

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Question 21

The domain of $f(x) = \log(x - 7)$ is

A) $x \geq 7$

B) $x > 7$

C) $x < 7$

D) $x \neq 7$

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Question 22

A sample of 1000 grams halves every period. After 2 periods, the mass remaining is, in grams

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Question 23

A sample of 640 grams halves every period. After 3 periods, the mass remaining is, in grams

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Question 24

$\log_2 8$ is

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Question 25

$\log_2 32$ is

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ANSWER KEY

1. 6
2. 3
3. 2
4. 3
5. 3
6. 900.41
7. 1389.15
8. A
9. B
10. C
11. 5
12. 13
13. A
14. 30
15. 45
16. B
17. B
18. A
19. B
20. A
21. B
22. 250
23. 80
24. 3
25. 5

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