ONTARIO FUNCTIONS, GRADE 11, UNIVERSITY PREPARATION (MCR3U) · UNIT B

Exponential Functions — Practice Test

Ontario Functions, Grade 11, University Preparation (MCR3U) • 25 questions

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 **The value of $f(t) = 100(2)^t$ when $t = 3$ is**

- A 400
- B 900
- C 800
- D 300

Understand It with Pulse | Flag a mistake

2 **The value of $f(t) = 100(3)^t$ when $t = 2$ is**

- A 450
- B 1000
- C 900
- D 200

Understand It with Pulse | Flag a mistake

3 **The value of $f(t) = 100(2)^t$ when $t = 5$ is**

- A 3200
- B 1600
- C 3300
- D 500

Understand It with Pulse | Flag a mistake

4 **The equation $3^x = 27$ has solution x =**

ANSWER _____

Understand It with Pulse | Flag a mistake

5 **A sample of 800 grams decays by half every hour. The amount remaining after 2 hours, in grams, is**

A 400

B 200

C 100

D 300

Understand It with Pulse | Flag a mistake

6 **A sample of 1600 grams decays by half every hour. The amount remaining after 3 hours, in grams, is**

- A 400
- B 200
- C 100
- D 300

Understand It with Pulse | Flag a mistake

7 **A sample of 400 grams decays by half every hour. The amount remaining after 4 hours, in grams, is**

- A 50
- B 12
- C 125
- D 25

Understand It with Pulse | Flag a mistake

8 **Solving $4^x = 256$ gives x =**

ANSWER _____

Understand It with Pulse | Flag a mistake

9 **The solution of the equation $2^x = 8$ is x equal to**

A 3

B 4

C 2

D 5

Understand It with Pulse | Flag a mistake

10 The solution of the equation $2^x = 16$ is x equal to

- A 5
- B 3
- C 6
- D 4

Understand It with Pulse | Flag a mistake

11 The solution of the equation $2^x = 32$ is x equal to

- A 6
- B 5
- C 4
- D 7

Understand It with Pulse | Flag a mistake

12 **The value of x that satisfies $5^x = 125$ is**

ANSWER _____

Understand It with Pulse | Flag a mistake

13 **If $2^(x+1) = 16$, then x is**

ANSWER _____

Understand It with Pulse | Flag a mistake

14 **The equation $10^x = 10000$ is solved by x =**

ANSWER _____

Understand It with Pulse | Flag a mistake

15 **A function is $f(t) = 50(2)^t$. The value when t = 4 is**

ANSWER _____

Understand It with Pulse | Flag a mistake

16 **A sample of 1000 grams decays by half every 2 hours. The amount remaining after 6 hours, in grams, is**

ANSWER _____

Understand It with Pulse | Flag a mistake

17 **A population starts at 1000 and doubles 3 times. The final population is**

A 8000

B 6000

C 4000

D 16000

Understand It with Pulse | Flag a mistake

18 **A population starts at 2000 and doubles 3 times. The final population is**

- A 12000
- B 16000
- C 8000
- D 32000

Understand It with Pulse | Flag a mistake

19 **A population starts at 500 and doubles 3 times. The final population is**

- A 4000
- B 3000
- C 2000
- D 8000

Understand It with Pulse | Flag a mistake

20 **A town has 200 people and its population doubles 3 times. The final population is**

ANSWER _____

Understand It with Pulse | Flag a mistake

21 **The horizontal asymptote of $y = 3^x + 2$ is**

A $y = 2$

B $y = 0$

C $y = 1$

D $x = 2$

Understand It with Pulse | Flag a mistake

22 The horizontal asymptote of $y = 3^x + 3$ is

- A $y = 0$
- B $y = 3$
- C $y = 1$
- D $x = 3$

Understand It with Pulse | Flag a mistake

23 The horizontal asymptote of $y = 3^x + 4$ is

- A $y = 0$
- B $y = 1$
- C $y = 4$
- D $x = 4$

Understand It with Pulse | Flag a mistake

24 The graph of $y = 2^x + 1$ has a horizontal asymptote at $y =$

ANSWER _____

Understand It with Pulse | Flag a mistake

25 The y intercept of $y = 2(3^x)$ is

A 3

B 2

C 6

D 0

Understand It with Pulse | Flag a mistake

ANSWER KEY

1. C
2. C
3. A
4. 3
5. B
6. B
7. D
8. 4
9. A
10. D
11. B
12. 3
13. 3
14. 4
15. 800
16. 125
17. A
18. B
19. A
20. 1600
21. A
22. B
23. C
24. 1
25. B

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