CALIFORNIA ALGEBRA II · UNIT 3 · 25 QUESTIONS

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 **The solution of log x = 2 is**

- A 2
- B 20
- C 100
- D 200

Understand It with Pulse | Flag a mistake

2 The solution of $2^x = 32$ is

- **A** 4
- **B** 16
- **C** 6
- **D** 5

Understand It with Pulse | Flag a mistake

3 The value of cos 60° is

- **A** 1
- **B** 0
- **C** $\sqrt{3}/2$
- **D** $\frac{1}{2}$

Understand It with Pulse | Flag a mistake

4 The value of 2^{-2} is

- A $\frac{1}{4}$
- B -1/4
- C 4
- D -4

Understand It with Pulse | Flag a mistake

5 The value of $\log_2 32$ is

- A 16
- B 6
- C 4
- D 5

Understand It with Pulse | Flag a mistake

6 **A sample of 80 grams halves every period. After 2 periods the mass remaining is**

- A 40
- B 20
- C 60
- D 10

Understand It with Pulse | Flag a mistake

7 **A sample of 120 grams halves once. The mass remaining is**

- A 240
- B 30
- C 90
- D 60

Understand It with Pulse | Flag a mistake

8 **An amount of 200 is halved three times. The amount left is**

A 12.5

B 25

C 50

D 100

Understand It with Pulse | Flag a mistake

9 **An amount of 96 is halved twice. The amount left is**

A 48

B 24

C 12

D 36

Understand It with Pulse | Flag a mistake

10 If $\cos\theta = \frac{5}{13}$ and $\sin\theta > 0$, then $\sin\theta$ is

- **A** $\frac{13}{12}$
- **B** $\frac{5}{12}$
- **C** $\frac{12}{13}$
- **D** $\frac{8}{13}$

Understand It with Pulse | Flag a mistake

11 If $\sin\theta = \frac{3}{5}$ and $\cos\theta > 0$, then $\cos\theta$ is

- **A** $\frac{4}{5}$
- **B** $\frac{5}{4}$
- **C** $\frac{2}{5}$
- **D** $\frac{3}{4}$

Understand It with Pulse | Flag a mistake

12 In a right triangle with adjacent side 4 and hypotenuse 5, the cosine of the angle is

- **A** $\frac{3}{5}$
- **B** $\frac{4}{5}$
- **C** $\frac{3}{4}$
- **D** $\frac{5}{4}$

Understand It with Pulse | Flag a mistake

13 In a right triangle with opposite side 3 and hypotenuse 5, the sine of the angle is

- **A** $\frac{5}{3}$
- **B** $\frac{3}{5}$
- **C** $\frac{3}{4}$
- **D** $\frac{4}{5}$

Understand It with Pulse | Flag a mistake

14 The amplitude of y = 2 cos x is

- A 1
- B 4
- C 2π
- D 2

Understand It with Pulse | Flag a mistake

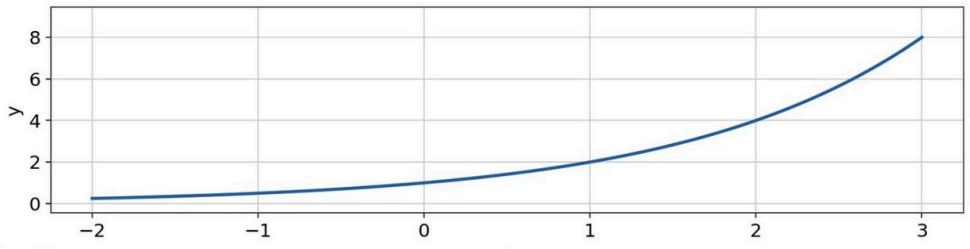
15 The amplitude of y = 3 sin x is

- A 3
- B 1
- C 2π
- D 6

Understand It with Pulse | Flag a mistake

16 The graph below shows $y = 2^x$. The value of y when x = 2 is

16 The graph below shows $y = 2^x$. The value of y when x = 2 is



A 1
B 8
C 4
D 2

A 1

B 8

C 4

D 2

Understand It with Pulse

Flag a mistake

17 **The period of y = cos 3x is**

A π/3

B 2π/3

C 2π

D 3π

Understand It with Pulse | Flag a mistake

18 **The period of y = sin 2x is**

A π/2

B 2π

C 4π

D π

Understand It with Pulse | Flag a mistake

19 The solution of $\log_2 x = 3$ is

- A 8
- B 5
- C 9
- D 6

Understand It with Pulse | Flag a mistake

20 The solution of $3^{x-1} = 27$ is

- A 2
- B 4
- C 3
- D 9

Understand It with Pulse | Flag a mistake

21 The value of cos 30° is

A $\sqrt{3}/2$

B $\sqrt{2}/2$

C $\frac{1}{2}$

D 1

Understand It with Pulse | Flag a mistake

22 The value of 4^3 is

ANSWER _____

Understand It with Pulse | Flag a mistake

23 The value of $\log_3 81$ is

A 4

B 3

C 9

D 27

Understand It with Pulse | Flag a mistake

24 The solution of $\log_3 x = 2$ is

ANSWER _____

Understand It with Pulse | Flag a mistake

25 **The solution of $5^{2x} = 25$ is**

A 1

B $\frac{1}{2}$

C 5

D 2

Understand It with Pulse | Flag a mistake

ANSWER KEY

1.	C	**10.**	C	**19.**	A
2.	D	**11.**	A	**20.**	B
3.	D	**12.**	B	**21.**	A
4.	A	**13.**	B	**22.**	64
5.	D	**14.**	D	**23.**	A
6.	B	**15.**	A	**24.**	9
7.	D	**16.**	C	**25.**	A
8.	B	**17.**	B		
9.	B	**18.**	D		

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