Activity 6.1: Exponential & Log Basics

A

Name: _____ Partner's name: _____ Date: _____

Directions: Solve or evaluate. Give exact answers unless told to round.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

$2^x = 32$

Answer: _____ Match? ☐ Yes ☐ No

2

$3^{x+1} = 81$

Answer: _____ Match? ☐ Yes ☐ No

3

Evaluate $\log_2 64$.

Answer: _____ Match? ☐ Yes ☐ No

4

Simplify $\log 4 + \log 25$.

Answer: _____ Match? ☐ Yes ☐ No

5

$\log_3(x + 1) = 2$

Answer: _____ Match? ☐ Yes ☐ No

6

Evaluate $\ln e^5$.

Answer: _____ Match? ☐ Yes ☐ No

7

A culture starts with 200 cells and doubles every hour. How many cells are there after 3 hours?

Answer: _____ Match? ☐ Yes ☐ No

8

\$1,000 is invested at 5% interest compounded annually. How much is it worth after 2 years?

Answer: _____ Match? ☐ Yes ☐ No

Activity 6.1: Exponential & Log Basics

B

Name: _____ Partner's name: _____ Date: _____

Directions: Solve or evaluate. Give exact answers unless told to round.

Work alone, then compare after each problem. If answers differ, find the mistake together.

1

$4^x = 1024$

Answer: _____ Match? ☐ Yes ☐ No

2

$5^{2x-1} = 3125$

Answer: _____ Match? ☐ Yes ☐ No

3

Evaluate $\log_3 729$.

Answer: _____ Match? ☐ Yes ☐ No

4

Simplify $\log 50 + \log 2$.

Answer: _____ Match? ☐ Yes ☐ No

5

$\log_2 x = 3$

Answer: _____ Match? ☐ Yes ☐ No

6

Evaluate $\log 100{,}000$.

Answer: _____ Match? ☐ Yes ☐ No

7

A culture starts with 100 cells and doubles every hour. How many cells are there after 4 hours?

Answer: _____ Match? ☐ Yes ☐ No

8

\$1,050 is invested at 5% interest compounded annually. How much is it worth after 1 year?

Answer: _____ Match? ☐ Yes ☐ No