

Interpret logarithms as exponents

1

What does the logarithm equation mean?

$$\log_2 8 = ?$$

A

What number would you raise 8 by to result in 2?

B

What number would you raise 2 by to result in 8?

2

What does the logarithm equation mean?

$$\log_2 8 = 3$$

A

To result in 8, you would raise 2 to the power of 3

B

To result in 2, you would raise 3 to the power of 8

3

To result in 125, you would raise 5 to the power of 3

A

$$\log_3 5 = 125$$

B

$$\log_{125} 5 = 3$$

C

$$\log_5 125 = 3$$

4

Convert the given exponent to the equivalent in logarithm form

$$4^3 = 64$$

A

$$\log_4 64 = 3$$

B

$$\log_{64} 3 = 4$$

C

$$\log_3 64 = 4$$

D

$$\log_{64} 4 = 3$$

5

What does the logarithm equation mean?

$$\log_3 303 = ?$$

A

What number would you raise 3 by to result in 303?

B

What number would you raise 303 by to result in 3?

6

Convert the given exponent to the equivalent in logarithm form

$$4^{2.26} = 23$$

A

$$\log_{23} 4 = 2.26$$

B

$$\log_{23} 2.26 = 4$$

C

$$\log_{2.26} 4 = 23$$

D

$$\log_4 23 = 2.26$$

E

$$\log_{2.26} 23 = 4$$

7

Which logarithm equation answers this?

What number would you raise

$$\frac{1}{6} \text{ by to result in } \frac{1}{216}?$$

A

$$\log_{\frac{1}{216}} ? = \frac{1}{6}$$

B

$$\log_? \frac{1}{216} = \frac{1}{6}$$

C

$$\log_{\frac{1}{6}} \frac{1}{216} = ?$$

8

Convert the given exponent to the equivalent in logarithm form

$$\left(\frac{1}{2}\right)^2 = \frac{1}{4}$$

A

$$\log_{\frac{1}{4}} 2 = \frac{1}{2}$$

B

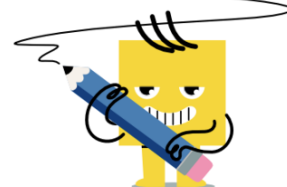
$$\log_2 \frac{1}{2} = \frac{1}{4}$$

C

$$\log_{\frac{1}{2}} \frac{1}{4} = 2$$

D

$$\log_{\frac{1}{4}} \frac{1}{2} = 2$$



Interpret logarithms as exponents

9

What does the logarithm equation mean?

$$\log_{\frac{1}{2}} \frac{1}{4} = ?$$

A

What number would you raise $\frac{1}{2}$ by to result in $\frac{1}{4}$?

B

What number would you raise $\frac{1}{4}$ by to result in $\frac{1}{2}$?

10

Convert the given logarithm to the equivalent in exponent form

$$\log_e 2.84 = x$$

A

$$e^x = 2.84$$

B

$$2.84^x = e$$

C

$$x^e = 2.84$$

11

Convert the given logarithm to the equivalent in exponent form

$$\log_{10} 125 = 2.1$$

A

$$2.1^{10} = 125$$

B

$$125^{2.1} = 10$$

C

$$125^{10} = 2.1$$

D

$$10^{2.1} = 125$$

12

What does the logarithm equation mean?

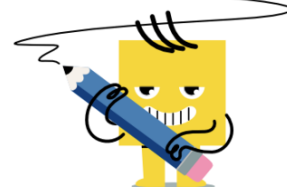
$$\log_{\frac{1}{9}} \frac{1}{81} = 2$$

A

To result in $\frac{1}{9}$, you would raise $\frac{1}{81}$ to the power of 2

B

To result in $\frac{1}{81}$, you would raise $\frac{1}{9}$ to the power of 2



Interpret logarithms as exponents

13

Convert the given logarithm to the equivalent in exponent form

$$\log_5 25 = 2$$

A

$$5^2 = 25$$

B

$$25^2 = 5$$

C

$$2^{25} = 5$$

14

Convert the given logarithm to the equivalent in exponent form

$$\log_2 5 = 2.4$$

A

$$2^{2.4} = 5$$

B

$$5^2 = 2.4$$

C

$$5^{2.4} = 2$$

D

$$2.4^2 = 5$$

15

Convert the given logarithm to the equivalent in exponent form

$$\log_{10} \frac{1}{100,000} = -5$$

A

$$10^{-5} = \frac{1}{100,000}$$

B

$$\frac{1}{100,000}^{-5} = 10$$

C

$$-5^{\frac{1}{100,000}} = 10$$

D

$$-5^{10} = \frac{1}{100,000}$$

16

Convert the given logarithm to the equivalent in exponent form

$$\log_{\frac{1}{3}} \frac{1}{81} = 4$$

A

$$4^{\frac{1}{81}} = \frac{1}{3}$$

B

$$\frac{1}{81}^{\frac{1}{3}} = 4$$

C

$$\frac{1}{3}^4 = \frac{1}{81}$$

D

$$4^{\frac{1}{3}} = \frac{1}{81}$$

E

$$\frac{1}{81}^4 = \frac{1}{3}$$

17

Solve the following logarithm

$$\log_9 1,409.29 = x$$

A

$$x = 5.3$$

B

$$x = 2.3$$

C

$$x = 3.3$$

D

$$x = 4.3$$

E

$$x = 1.3$$