

Evaluate logarithms with integer values

1

What does the logarithm equation mean?

$$\log_{10} 1,000 = ?$$

A

What number would you raise 1,000 by to result in 10?

B

What number would you raise 10 by to result in 1,000?

2

What number would you raise 3 by to result in 9?

A

$$\log_3 9 = ?$$

B

$$\log_9 3 = ?$$

C

$$\log_? 9 = 3$$

D

$$\log_? 3 = 9$$

3

What does the logarithm equation mean?

$$\log_6 216 = 3$$

A

To result in 6, you would raise 216 to the power of 3

B

To result in 216, you would raise 6 to the power of 3

4

To result in 16, you would raise 4 to the power of 2

A

$$\log_2 4 = 16$$

B

$$\log_{16} 2 = 4$$

C

$$\log_{16} 4 = 2$$

D

$$\log_2 16 = 4$$

E

$$\log_4 16 = 2$$

5

What does the logarithm equation mean?

$$\log_{\frac{1}{7}} \frac{1}{49} = ?$$

A

What number would you raise $\frac{1}{49}$ by to result in $\frac{1}{7}$?

B

What number would you raise $\frac{1}{7}$ by to result in $\frac{1}{49}$?

6

Which logarithm equation shows this?

To result in $\frac{1}{64}$, you would
raise $\frac{1}{8}$ to the power of 2

A

$$\log_2 \frac{1}{64} = \frac{1}{8}$$

B

$$\log_{\frac{1}{8}} \frac{1}{64} = 2$$

C

$$\log_{\frac{1}{64}} 2 = \frac{1}{8}$$

7

Convert the given exponent to the equivalent in logarithm form

$$10^4 = 10,000$$

A

$$\log_{10} 10,000 = 4$$

B

$$\log_{10,000} 4 = 10$$

C

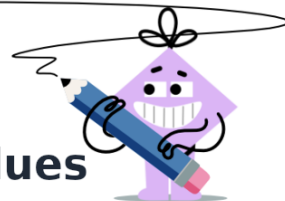
$$\log_{10,000} 10 = 4$$

D

$$\log_4 10 = 10,000$$

E

$$\log_4 10,000 = 10$$

**Evaluate logarithms with integer values****8**

What does the logarithm equation mean?

$$\log_{\frac{1}{4}} \frac{1}{64} = 3$$

A

To result in $\frac{1}{4}$, you would
raise $\frac{1}{64}$ to the power of 3

B

To result in $\frac{1}{64}$, you would
raise $\frac{1}{4}$ to the power of 3

9

Convert the given logarithm to the equivalent in exponent form

$$\log_6 216 = 3$$

A $216^6 = 3$

B $6^3 = 216$

C $3^{216} = 6$

D $216^3 = 6$

10

Use a logarithm to solve for the missing exponent

$$5^x = 25$$

A $x = 3$

B $x = 0$

C $x = 2$

D $x = 4$

E $x = 1$

11

Solve the following logarithm

$$\log_{\frac{1}{2}} \frac{1}{8} = x$$

A $x = 0$

B $x = 6$

C $x = 4$

D $x = 8$

E $x = -3$

F $x = 3$

12

Use a logarithm to solve for the missing exponent

$$4^x = 16$$

A $x = 0$

B $x = 2$

C $x = 1$

D $x = 4$

E $x = 3$