# Logarithms - Meaning, Equation to Words as Question Mark (Fractions)

**1**

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

What does the logarithm equation mean?

A: What number would you raise $\frac{1}{1,000}$ by to result in $\frac{1}{10}$?

B: What number would you raise $\frac{1}{10}$ by to result in $\frac{1}{1,000}$?

**2**

$$\log_{\frac{1}{3}} \frac{1}{27} = ?$$

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{3}$ by to result in $\frac{1}{27}$? | What number would you raise $\frac{1}{27}$ by to result in $\frac{1}{3}$? |

**3**

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

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{9}$ by to result in $\frac{1}{81}$? | What number would you raise $\frac{1}{81}$ by to result in $\frac{1}{9}$? |

**4**

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

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{64}$ by to result in $\frac{1}{4}$? | What number would you raise $\frac{1}{4}$ by to result in $\frac{1}{64}$? |

**5**

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

What does the logarithm equation mean?

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

**6**

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

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{81}$ by to result in $\frac{1}{3}$? | What number would you raise $\frac{1}{3}$ by to result in $\frac{1}{81}$? |

**7**

$$\log_{\frac{1}{5}} \frac{1}{25} = ?$$

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{5}$ by to result in $\frac{1}{25}$? | What number would you raise $\frac{1}{25}$ by to result in $\frac{1}{5}$? |

**8**

$$\log_{\frac{1}{6}} \frac{1}{36} = ?$$

What does the logarithm equation mean?

| A | B |
|---|---|
| What number would you raise $\frac{1}{6}$ by to result in $\frac{1}{36}$? | What number would you raise $\frac{1}{36}$ by to result in $\frac{1}{6}$? |