Answer Key · Lesson 8.1: Logarithms

School Launch · Algebra II · Unit 8 · Worksheet A · for the parent

Key

1. 1

Evaluate: $\log_{2} 2$.

2. 4

Evaluate: $\log_{10} 10000$.

3. 2

Evaluate: $\log_{2} 4$.

4. 4

1. Write 16 as a power of 2: $16 = 2^{4}$
2. So $\log_{2} 16 = 4$

Evaluate: $\log_{2} 16$.

5. 0

1. Write 1 as a power of 5: $1 = 5^{0}$
2. So $\log_{5} 1 = 0$

Evaluate: $\log_{5} 1$.

6. 0

1. Write 1 as a power of 2: $1 = 2^{0}$
2. So $\log_{2} 1 = 0$

Evaluate: $\log_{2} 1$.

7. 1

1. Write 5 as a power of 5: 5^{1}
2. So $\log_{5} 5 = 1$

Evaluate: $\log_{5} 5$.

8. $\frac{3}{2}$

1. Write $2\sqrt{2}$ as a power of 2: $2\sqrt{2} = 2^{\frac{3}{2}}$
2. So $\log_{2} 2\sqrt{2} = \frac{3}{2}$

Evaluate: $\log_{2} 2\sqrt{2}$.

9. $\frac{1}{2}$

1. Write $\sqrt{2}$ as a power of 2: $\sqrt{2} = 2^{\frac{1}{2}}$
2. So $\log_{2} \sqrt{2} = \frac{1}{2}$

Evaluate: $\log_{2} \sqrt{2}$.

10. $\frac{3}{2}$

1. Write $10\sqrt{10}$ as a power of 10: $10\sqrt{10} = 10^{\frac{3}{2}}$
2. So $\log_{10} 10\sqrt{10} = \frac{3}{2}$

Evaluate: $\log_{10} 10\sqrt{10}$.