# Exponents and Logarithms ... Set 6

## Exponents and Logarithms

### Rewrite each equation in exponential form.

1) 
$$\log_{11} 121 = 2$$

2) 
$$\log_{9} 81 = 2$$

3) 
$$\log_7 49 = 2$$

4) 
$$\log_{216} 6 = \frac{1}{3}$$

#### Rewrite each equation in logarithmic form.

5) 
$$81^{\frac{1}{2}} = 9$$

6) 
$$16^2 = 256$$

7) 
$$7^2 = 49$$

8) 
$$12^2 = 144$$

### Rewrite each equation in exponential form.

9) 
$$\log_x 191 = y$$

10) 
$$\log_5 n = -2$$

11) 
$$\log_5 x = 19$$

12) 
$$\log_n m = -6$$

### Rewrite each equation in logarithmic form.

13) 
$$x^y = 178$$

14) 
$$19^{-19} = x$$

15) 
$$x^y = z$$

16) 
$$b^a = 154$$

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#### Answers

Exponents and Logarithms

Rewrite each equation in exponential form.

1) 
$$\log_{11} 121 = 2$$

$$11^2 = 121$$

2) 
$$\log_9 81 = 2$$

$$9^2 = 81$$

3) 
$$\log_7 49 = 2$$

$$7^2 = 49$$

4) 
$$\log_{216} 6 = \frac{1}{3}$$

$$\frac{1}{216^3} = 6$$

Rewrite each equation in logarithmic form.

5) 
$$81^{\frac{1}{2}} = 9$$

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

6) 
$$16^2 = 256$$

$$\log_{16} 256 = 2$$

7) 
$$7^2 = 49$$

$$\log_{7} 49 = 2$$

8) 
$$12^2 = 144$$

$$\log_{12} 144 = 2$$

Rewrite each equation in exponential form.

9) 
$$\log_x 191 = y$$

$$x^{y} = 191$$

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Rewrite each equation in logarithmic form.

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$$x^y = 178$$

$$\log_{x} 178 = y$$

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15) 
$$x^y = z$$

$$\log_{x} z = y$$

16) 
$$b^a = 154$$

$$\log_b 154 = a$$