



Logarithms - Solve Exponent Equation (From Decimals)

1 Use a logarithm to solve for the missing exponent

$$10^x = 10,000$$

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|---------|---------|---------|---------|---------|
| A | B | C | D | E |
| $x = 4$ | $x = 3$ | $x = 2$ | $x = 6$ | $x = 5$ |

2 Use a logarithm to solve for the missing exponent

$$8^x = 11,585.24$$

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|---|-----------|---|-----------|
| A | $x = 5.5$ | B | $x = 6.5$ |
| C | $x = 4.5$ | D | $x = 2.5$ |
| E | $x = 3.5$ | | |

3 Use a logarithm to solve for the missing exponent

$$6^x = 216$$

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|---------|---------|---------|---------|---------|
| A | B | C | D | E |
| $x = 5$ | $x = 3$ | $x = 4$ | $x = 1$ | $x = 2$ |

4 Use a logarithm to solve for the missing exponent

$$4^x = 64$$

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|---------|---------|---------|
| A | B | C |
| $x = 5$ | $x = 1$ | $x = 3$ |
| D | E | |
| $x = 2$ | $x = 4$ | |

5 Use a logarithm to solve for the missing exponent

$$5^x = 106.42$$

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|---|-----------|---|-----------|
| A | $x = 1.9$ | B | $x = 4.9$ |
| C | $x = 3.9$ | D | $x = 0.9$ |
| E | $x = 2.9$ | | |

6 Use a logarithm to solve for the missing exponent

$$3^x = 217.72$$

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|---|-----------|---|-----------|
| A | $x = 2.9$ | B | $x = 3.9$ |
| C | $x = 5.9$ | D | $x = 6.9$ |
| E | $x = 4.9$ | | |

7 Use a logarithm to solve for the missing exponent

$$8^x = 222.86$$

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|---|-----------|---|-----------|
| A | $x = 1.6$ | B | $x = 2.6$ |
| C | $x = 4.6$ | D | $x = 3.6$ |
| E | $x = 0.6$ | | |

8 Use a logarithm to solve for the missing exponent

$$2^x = 11.31$$

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|---|-----------|---|-----------|
| A | $x = 3.5$ | B | $x = 1.5$ |
| C | $x = 5.5$ | D | $x = 4.5$ |
| E | $x = 2.5$ | | |