



Exponents - Fractional Exponents with Integer Base - Explanation to Answer

1 Given the hint, what is the fractional exponent the same as?

$$16^{(\frac{1}{2})} \cdot 16^{(\frac{1}{2})} = 16$$

$$16^{(\frac{1}{2})} = ?$$

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|----|---|----------------|--------------------------|---|---|
| A | B | C | D | E | F |
| 16 | 5 | $\sqrt[2]{16}$ | $\frac{1}{\sqrt[2]{16}}$ | 4 | 3 |

2 Given the hint, what is the fractional exponent the same as?

$$27^{(\frac{1}{3})} \cdot 27^{(\frac{1}{3})} \cdot 27^{(\frac{1}{3})} = 27$$

$$27^{(\frac{1}{3})} = ?$$

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|--------------------------|---|---|---|----------------|----|
| A | B | C | D | E | F |
| $\frac{1}{\sqrt[3]{27}}$ | 4 | 2 | 3 | $\sqrt[3]{27}$ | 27 |

3 Given the hint, what is the fractional exponent the same as?

$$125^{(\frac{1}{3})} \cdot 125^{(\frac{1}{3})} \cdot 125^{(\frac{1}{3})} = 125$$

$$125^{(\frac{1}{3})} = ?$$

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|---|---|-----------------|---------------------------|-----|---|
| A | B | C | D | E | F |
| 4 | 5 | $\sqrt[3]{125}$ | $\frac{1}{\sqrt[3]{125}}$ | 125 | 6 |

4 Given the hint, what is the fractional exponent the same as?

$$216^{(\frac{1}{3})} \cdot 216^{(\frac{1}{3})} \cdot 216^{(\frac{1}{3})} = 216$$

$$216^{(\frac{1}{3})} = ?$$

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|---------------------------|---|---|-----------------|-----|---|
| A | B | C | D | E | F |
| $\frac{1}{\sqrt[3]{216}}$ | 5 | 6 | $\sqrt[3]{216}$ | 216 | 7 |

5 Given the hint, what is the fractional exponent the same as?

$$25^{(\frac{1}{2})} \cdot 25^{(\frac{1}{2})} = 25$$

$$25^{(\frac{1}{2})} = ?$$

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|----------------|---|---|--------------------------|---|----|
| A | B | C | D | E | F |
| $\sqrt[2]{25}$ | 6 | 5 | $\frac{1}{\sqrt[2]{25}}$ | 4 | 25 |

6 Given the hint, what is the fractional exponent the same as?

$$32^{(\frac{1}{5})} \cdot 32^{(\frac{1}{5})} \cdot 32^{(\frac{1}{5})} \cdot 32^{(\frac{1}{5})} \cdot 32^{(\frac{1}{5})} = 32$$

$$32^{(\frac{1}{5})} = ?$$

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|---|---|--------------------------|----------------|----|---|
| A | B | C | D | E | F |
| 3 | 2 | $\frac{1}{\sqrt[5]{32}}$ | $\sqrt[5]{32}$ | 32 | 1 |

7 Given the hint, what is the fractional exponent the same as?

$$36^{(\frac{1}{2})} \cdot 36^{(\frac{1}{2})} = 36$$

$$36^{(\frac{1}{2})} = ?$$

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|--------------------------|----------------|---|---|---|----|
| A | B | C | D | E | F |
| $\frac{1}{\sqrt[2]{36}}$ | $\sqrt[2]{36}$ | 7 | 5 | 6 | 36 |

8 Given the hint, what is the fractional exponent the same as?

$$16^{(\frac{1}{4})} \cdot 16^{(\frac{1}{4})} \cdot 16^{(\frac{1}{4})} \cdot 16^{(\frac{1}{4})} = 16$$

$$16^{(\frac{1}{4})} = ?$$

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|----------------|---|---|--------------------------|---|----|
| A | B | C | D | E | F |
| $\sqrt[4]{16}$ | 1 | 3 | $\frac{1}{\sqrt[4]{16}}$ | 2 | 16 |