



Exponents - Fractional Exponents with Integer Base - Explanation to Radical

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

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

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

- | | | | | | |
|-------------------|-----------------------------|------------|--------------------|--------------------|---------------------|
| A $\sqrt[3]{216}$ | B $\frac{1}{\sqrt[3]{216}}$ | C 1 | D $5\sqrt[3]{216}$ | E $4\sqrt[3]{216}$ | F $\sqrt[3]{216}^3$ |
|-------------------|-----------------------------|------------|--------------------|--------------------|---------------------|

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

$$81^{(\frac{1}{4})} \cdot 81^{(\frac{1}{4})} \cdot 81^{(\frac{1}{4})} \cdot 81^{(\frac{1}{4})} = 81$$

$$81^{(\frac{1}{4})} = ?$$

- | | | | | | |
|-------------------|----------------------------|------------------|-------------------|------------|--------------------|
| A $4\sqrt[4]{81}$ | B $\frac{1}{\sqrt[4]{81}}$ | C $\sqrt[4]{81}$ | D $3\sqrt[4]{81}$ | E 1 | F $\sqrt[4]{81}^4$ |
|-------------------|----------------------------|------------------|-------------------|------------|--------------------|

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

$$64^{(\frac{1}{3})} \cdot 64^{(\frac{1}{3})} \cdot 64^{(\frac{1}{3})} = 64$$

$$64^{(\frac{1}{3})} = ?$$

- | | | | | | |
|--------------------|-------------------|------------|-------------------|----------------------------|------------------|
| A $\sqrt[3]{64}^3$ | B $2\sqrt[3]{64}$ | C 1 | D $3\sqrt[3]{64}$ | E $\frac{1}{\sqrt[3]{64}}$ | F $\sqrt[3]{64}$ |
|--------------------|-------------------|------------|-------------------|----------------------------|------------------|

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

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

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

- | | | | | | |
|----------------|------------|----------------|----------------|----------------|---------------|
| A $2\sqrt{25}$ | B 1 | C $3\sqrt{25}$ | D $4\sqrt{25}$ | E $5\sqrt{25}$ | F $\sqrt{25}$ |
|----------------|------------|----------------|----------------|----------------|---------------|

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

$$9^{(\frac{1}{2})} \cdot 9^{(\frac{1}{2})} = 9$$

$$9^{(\frac{1}{2})} = ?$$

- | | | |
|------------------------|--------------|---------------|
| A $4\sqrt{9}$ | B $\sqrt{9}$ | C 1 |
| D $\frac{1}{\sqrt{9}}$ | E $\sqrt{3}$ | F $2\sqrt{9}$ |

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

$$8^{(\frac{1}{3})} \cdot 8^{(\frac{1}{3})} \cdot 8^{(\frac{1}{3})} = 8$$

$$8^{(\frac{1}{3})} = ?$$

- | | | | | | |
|-----------------|------------|-----------------|------------------|------------------|------------------|
| A $\sqrt[3]{2}$ | B 1 | C $\sqrt[3]{8}$ | D $3\sqrt[3]{8}$ | E $5\sqrt[3]{8}$ | F $2\sqrt[3]{8}$ |
|-----------------|------------|-----------------|------------------|------------------|------------------|

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

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

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

- | | | | | | |
|----------------------------|-------------------|------------------|--------------------|-------------------|------------|
| A $\frac{1}{\sqrt[3]{27}}$ | B $5\sqrt[3]{27}$ | C $\sqrt[3]{27}$ | D $\sqrt[3]{27}^3$ | E $3\sqrt[3]{27}$ | F 1 |
|----------------------------|-------------------|------------------|--------------------|-------------------|------------|

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

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

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

- | | | | | | |
|-------------------------|----------------|---------------|------------|----------------|-----------------|
| A $\frac{1}{\sqrt{36}}$ | B $4\sqrt{36}$ | C $\sqrt{36}$ | D 1 | E $2\sqrt{36}$ | F $\sqrt{36}^2$ |
|-------------------------|----------------|---------------|------------|----------------|-----------------|