



Math worksheet on 'Exponents - Negative Fractional Exponents with Square Integer Base - Factored Exponent to Answer (Level 2)'. Part of a broader unit on 'Exponents - Fractional Bases and Exponents - Practice'

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1 Find the answer when this factored number is raised to its exponent

$$(2 \cdot 2 \cdot 2 \cdot 2 \cdot 2)^{\left(\frac{-1}{5}\right)}$$

|               |                          |                          |               |               |                          |
|---------------|--------------------------|--------------------------|---------------|---------------|--------------------------|
| a             | b                        | c                        | d             | e             | f                        |
| $\frac{1}{2}$ | $\frac{1}{2\sqrt[5]{4}}$ | $\frac{1}{2\sqrt[5]{2}}$ | $\frac{1}{1}$ | $\frac{1}{3}$ | $\frac{1}{2\sqrt[5]{3}}$ |

2 Find the answer when this factored number is raised to its exponent

$$(2 \cdot 2 \cdot 2)^{\left(\frac{-1}{3}\right)}$$

|               |               |               |                          |               |                          |
|---------------|---------------|---------------|--------------------------|---------------|--------------------------|
| a             | b             | c             | d                        | e             | f                        |
| $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{1}$ | $\frac{1}{2\sqrt[3]{3}}$ | $\frac{1}{3}$ | $\frac{1}{2\sqrt[3]{2}}$ |

3 Find the answer when this factored number is raised to its exponent

$$(2 \cdot 2)^{\left(\frac{-1}{2}\right)}$$

|               |                       |               |               |               |                       |
|---------------|-----------------------|---------------|---------------|---------------|-----------------------|
| a             | b                     | c             | d             | e             | f                     |
| $\frac{1}{2}$ | $\frac{1}{2\sqrt{3}}$ | $\frac{1}{1}$ | $\frac{1}{4}$ | $\frac{1}{5}$ | $\frac{1}{2\sqrt{2}}$ |

4 Find the answer when this factored number is raised to its exponent

$$(2 \cdot 2 \cdot 2 \cdot 2 \cdot 2 \cdot 2)^{\left(\frac{-1}{3}\right)}$$

|               |               |               |               |                          |               |
|---------------|---------------|---------------|---------------|--------------------------|---------------|
| a             | b             | c             | d             | e                        | f             |
| $\frac{1}{3}$ | $\frac{1}{1}$ | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{4\sqrt[3]{4}}$ | $\frac{1}{5}$ |

5 Find the answer when this factored number is raised to its exponent

$$(2 \cdot 2 \cdot 3 \cdot 3)^{\left(\frac{-1}{2}\right)}$$

|               |               |                       |                       |               |               |
|---------------|---------------|-----------------------|-----------------------|---------------|---------------|
| a             | b             | c                     | d                     | e             | f             |
| $\frac{1}{1}$ | $\frac{1}{2}$ | $\frac{1}{6\sqrt{3}}$ | $\frac{1}{6\sqrt{2}}$ | $\frac{1}{4}$ | $\frac{1}{6}$ |

6 Find the answer when this factored number is raised to its exponent

$$(3 \cdot 3)^{\left(\frac{-1}{2}\right)}$$

|               |               |                       |                       |               |               |
|---------------|---------------|-----------------------|-----------------------|---------------|---------------|
| a             | b             | c                     | d                     | e             | f             |
| $\frac{1}{3}$ | $\frac{1}{2}$ | $\frac{1}{3\sqrt{2}}$ | $\frac{1}{3\sqrt{3}}$ | $\frac{1}{4}$ | $\frac{1}{1}$ |

7 Find the answer when this factored number is raised to its exponent

$$(3 \cdot 3 \cdot 3 \cdot 3)^{\left(\frac{-1}{4}\right)}$$

|                          |               |               |               |                          |               |
|--------------------------|---------------|---------------|---------------|--------------------------|---------------|
| a                        | b             | c             | d             | e                        | f             |
| $\frac{1}{3\sqrt[4]{4}}$ | $\frac{1}{5}$ | $\frac{1}{4}$ | $\frac{1}{3}$ | $\frac{1}{3\sqrt[4]{2}}$ | $\frac{1}{1}$ |