



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

Learn online:

[app.mobius.academy/math/units/exponents\\_fractional\\_bases\\_and\\_exponents\\_practice](http://app.mobius.academy/math/units/exponents_fractional_bases_and_exponents_practice)

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

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

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

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

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

- |             |             |             |            |             |   |
|-------------|-------------|-------------|------------|-------------|---|
| a           | b           | c           | d          | e           | f |
| $3\sqrt{6}$ | $2\sqrt{6}$ | $5\sqrt{6}$ | $\sqrt{6}$ | $3\sqrt{2}$ | 3 |

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

$$(2 \cdot 2 \cdot 3 \cdot 3 \cdot 5)^{\left(\frac{1}{2}\right)}$$

- |             |             |             |   |            |             |
|-------------|-------------|-------------|---|------------|-------------|
| a           | b           | c           | d | e          | f           |
| $3\sqrt{5}$ | $2\sqrt{5}$ | $6\sqrt{5}$ | 6 | $\sqrt{5}$ | $6\sqrt{2}$ |

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

$$(3 \cdot 3 \cdot 3 \cdot 5)^{\left(\frac{1}{3}\right)}$$

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

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

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

- |             |   |             |             |             |            |
|-------------|---|-------------|-------------|-------------|------------|
| a           | b | c           | d           | e           | f          |
| $2\sqrt{3}$ | 6 | $3\sqrt{3}$ | $6\sqrt{3}$ | $5\sqrt{3}$ | $\sqrt{3}$ |

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

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

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

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

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

- |   |                |                |               |                |                |
|---|----------------|----------------|---------------|----------------|----------------|
| a | b              | c              | d             | e              | f              |
| 3 | $3\sqrt[3]{6}$ | $4\sqrt[3]{6}$ | $\sqrt[3]{6}$ | $5\sqrt[3]{6}$ | $2\sqrt[3]{6}$ |