

Expanded Expressions Answer Key

1) Expanded form: $2 \times 2 \times 2 \times 2$

Explanation: The exponent 4 means multiply the base, 2, by itself 4 times.

2) Expanded form: $5 \times 5 \times 5$

Explanation: The exponent 3 means multiply the base, 5, by itself 3 times.

3) Expanded form: 8×8

Explanation: The exponent 2 means multiply the base, 8, by itself 2 times.

4) Expanded form: $3 \times 3 \times 3 \times 3 \times 3$

Explanation: The exponent 5 means multiply the base, 3, by itself 5 times.

5) Expanded form: 10×10

Explanation: The exponent 2 means multiply the base, 10, by itself 2 times.

6) Expanded form: $6 \times 6 \times 6 \times 6$

Explanation: The exponent 4 means multiply the base, 6, by itself 4 times.

7) Expanded form: $7 \times 7 \times 7$

Explanation: The exponent 3 means multiply the base, 7, by itself 3 times.

8) Expanded form: $4 \times 4 \times 4 \times 4 \times 4 \times 4$

Explanation: The exponent 6 means multiply the base, 4, by itself 6 times.

9) Expanded form: 9×9

Explanation: The exponent 2 means multiply the base, 9, by itself 2 times.

10) Expanded form: $12 \times 12 \times 12$

Explanation: The exponent 3 means multiply the base, 12, by itself 3 times.

Teacher's Guide

- Model one example by identifying the base, writing the expanded form, and explaining the exponent in a complete sentence.
- Encourage students to use the sentence frame: "The exponent __ means multiply the base, __, by itself __ times."
- Support students who need extra help by having them count each repeated factor as they write the expanded form.
- Challenge advanced students to explain why the exponent is not the same as multiplying the base by the exponent.
- Have partners read their explanations aloud and check that they correctly describe the meaning of the exponent.
- Extend the activity by asking students to create two exponent expressions and write matching explanations for a classmate to solve.
- Reinforce vocabulary by having students underline the base and circle the exponent before completing each problem.