

Power Of Ten Ladder Answer Key

1. $10^2 = 100$
2. $10^3 = 1,000$
3. $10^4 = 10,000$
4. $10^5 = 100,000$
5. $10^6 = 1,000,000$
6. $10^7 = 10,000,000$
7. $10^8 = 100,000,000$
8. $10^9 = 1,000,000,000$
9.
 - $10 = 10^1 = 10$
 - $10 \times 10 = 10^2 = 100$
 - $10 \times 10 \times 10 = 10^3 = 1,000$
 - $10 \times 10 \times 10 \times 10 = 10^4 = 10,000$
10. 10 multiplied by itself 10 times. Value = $10^{10} = 10,000,000,000$.

Teacher's Guide

- Begin by modeling how repeated multiplication becomes exponent notation using one or two examples.
- Remind students that the exponent tells how many times 10 is used as a factor.
- Encourage students to notice the pattern that each higher power of 10 adds one zero.
- Support learners by allowing them to count the factors before writing the exponent.
- Challenge advanced students to predict 10^{11} and 10^{12} without writing all the factors.
- Have partners explain how they determined each exponent before comparing answers.
- Extend the lesson by connecting powers of 10 to place value and scientific notation.