

## Exponent Mistakes Answer Key

1. Exponents should be added, not multiplied. Correct answer:  $x^7$
2. Exponents should be subtracted, not added. Correct answer:  $m^6$
3. Exponents should be multiplied, not added. Correct answer:  $a^6$
4. The exponent applies to both the coefficient and the variable. Correct answer:  $4b^2$
5. The exponent applies to both the numerator and the denominator.  
Correct answer:  $\frac{y^2}{z^2}$
6. Exponents should be added when multiplying like bases. Correct answer:  $c^7$
7. Exponents should be multiplied for a power of a power. Correct answer:  $n^{12}$
8. Exponents should be subtracted, not multiplied. Correct answer:  $p^5$

### Teacher's Guide

- Model the first problem by identifying the incorrect step before discussing the correct exponent property.
- Encourage students to explain the error in words rather than only writing the correct answer.
- Provide an exponent property reference chart for students who need additional support.
- Have students work with a partner to compare explanations before reviewing answers as a class.
- Increase engagement by asking students to act as "math detectives" and justify each correction with evidence.
- Extend learning by having students create their own incorrect exponent solution for a classmate to analyze and correct.