

Exponent Showdown Answer Key

1. Exponent 6 is greater than exponent 5, so the first number is larger.
2. = Both the coefficient and exponent are the same.
3. The exponents are equal, so compare the coefficients. 8.2 is greater than 7.9.
4. < The coefficients are equal, but 10^{-6} is smaller than 10^{-5} .
5. < The exponents are equal, so compare the coefficients. 2.9 is less than 3.1.
6. Exponent -8 is greater than exponent -9, so the first number is larger.
7. Exponent 3 is greater than exponent 2, so the first number is larger.
8. The exponents are equal, so compare the coefficients. 7.4 is greater than 6.9.
9. < The coefficients are equal, but exponent 5 is greater than exponent 4.
10. The exponents are equal, so compare the coefficients. 2.75 is greater than 2.68.

Teacher's Guide

- Quick implementation tips
 - o Remind students to compare exponents first.
 - o If the exponents are the same, compare only the coefficients.
 - o Review that for negative exponents, a value with the exponent closer to zero is larger.
- Differentiation strategies
 - o Provide a reference chart summarizing comparison rules for scientific notation.
 - o Encourage students who need support to rewrite one or two pairs in standard form to verify their answers.
 - o Challenge advanced students to explain each comparison without converting to standard form.
- Engagement ideas
 - o Have students explain their reasoning to a partner before writing it down.
 - o Turn each problem into a quick class vote, then discuss which part of the notation determined the answer.