

Name:

Date:

Course 3 Quiz: 1.4 and 1.5 Zero Exponent

Simplify each expression. Write your answer in exponential notation.

①  $13^4 \cdot 13^9$

②  $\left(\frac{1}{5}\right)^6 \cdot \left(\frac{1}{5}\right)$

③  $\frac{\left(\frac{2}{5}\right)^7 \cdot \left(\frac{2}{5}\right)^6 \cdot \left(\frac{2}{5}\right)^3}{\left(\frac{2}{5}\right)^5 \cdot \left(\frac{2}{5}\right)^4 \cdot \left(\frac{2}{5}\right)^3}$

④  $y^{14} \div y^{11}$

Use the power of product property to simplify numerical expressions.

⑤  $\left(\frac{3}{4}\right)^5 \cdot \left(\frac{4}{9}\right)^5$

⑥  $20^3 \cdot 13^3$

Solve

⑦  $14^0 \div 14^2$

⑧  $4^3 \cdot 4^0$

Solve

⑨  $\frac{7^3 \cdot 7^4}{7^7}$

⑩  $3^2 \cdot 3^0 \cdot 3^2$

Extra Credit

$$\frac{(5^3)^{-4}}{10^{-8} \cdot (-2)^5}$$