

## Quotient of Powers Property

Write the quotient as repeated multiplication. Then write the quotient as a power.

$$\textcircled{1} \frac{3^5}{3^3} = \frac{\cancel{3} \cdot \cancel{3} \cdot \cancel{3} \cdot 3 \cdot 3}{\cancel{3} \cdot \cancel{3} \cdot \cancel{3}} = 3^{5-3} = \textcircled{3^2}$$

Simplify the expression. Write your answer as a power.

$$\textcircled{2} \frac{5^8}{5^2} = 5^{8-2} = \textcircled{5^6}$$

$$\textcircled{3} \frac{X^9 \cdot X^5}{X^4} = \frac{X^{9+5}}{X^4} = \frac{X^{14}}{X^4} = X^{14-4} = \textcircled{X^{10}}$$

$$\textcircled{4} \frac{9^8 \cdot 9^2}{9^5} \cdot \frac{9^4}{9^2} \cdot \frac{9^7}{9^2 \cdot 9^4} = \frac{9^{8+2+4+7}}{9^{5+2+2+4}} = \frac{9^{21}}{9^{13}} = 9^{21-13} = \textcircled{9^8}$$