

Name: _____

Score: _____

Exponent Rules

Use product rule to rewrite each expression as single positive exponent.

1) $5^{-8} \times 5^{-5}$	2) $18^{-4} \times 18^3$	3) $13^6 \times 13^{-5}$
4) $16^3 \times 16^{-6}$	5) $12^7 \times 12^3$	6) $9^{-9} \times 9^2$

Use quotient rule to rewrite each expression as single positive exponent.

1) $4^2 \div 4^{10}$	2) $19^7 \div 19^{-8}$	3) $7^5 \div 7^{-4}$
4) $10^3 \div 10^{-7}$	5) $12^{-5} \div 12^{-8}$	6) $9^8 \div 9^{-8}$

Use power rule to rewrite each expression as single positive exponent.

1) $(15^9)^{-7}$	2) $(7^3)^6$	3) $(17^{-4})^7$
4) $(3^{-5})^{-4}$	5) $(2^8)^8$	6) $(5^{-3})^2$

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Exponent Rules

Use laws of exponents and simplify. Write your answers in positive exponents.

1) $(n^6)^5$

2) $s^4 \cdot s^{10}$

3) $\frac{b^7}{b^5}$

4) $(k^{10})^7$

5) $\frac{y^3}{y^8}$

6) $(z^4)^9$

7) $\frac{m^9}{m^4}$

8) $r^{10} \cdot r^6$

9) $g^9 \cdot g^2$

10) $\frac{r^{10}}{r^5}$

11) $(p^3)^8$

12) $h^4 \cdot h^5$

13) $(d^4)^6$

14) $q^8 \cdot q^2$

15) $\frac{l^2}{l^4}$