

Name _____

Date _____

Properties of Exponents Practice

Simplify each expression using the properties of exponents. Write the answer as a single term with a positive exponent.

$4^6 \cdot 4^3 = \underline{\hspace{2cm}}$	$3^{-2} = \underline{\hspace{2cm}}$	$\frac{6^{14}}{6^{12}} = \underline{\hspace{2cm}}$	$(5^3)^5 = \underline{\hspace{2cm}}$
$2^{-8} = \underline{\hspace{2cm}}$	$\frac{12^9}{12^5} = \underline{\hspace{2cm}}$	$8^3 \cdot 8^2 = \underline{\hspace{2cm}}$	$(17^4)^6 = \underline{\hspace{2cm}}$
$(13^2)^{11} = \underline{\hspace{2cm}}$	$3^7 \cdot 3^8 = \underline{\hspace{2cm}}$	$14^{-15} = \underline{\hspace{2cm}}$	$\frac{9^{23}}{9^{16}} = \underline{\hspace{2cm}}$
$7^9 \cdot 7^{12} = \underline{\hspace{2cm}}$	$(4^6)^5 = \underline{\hspace{2cm}}$	$\frac{10^{25}}{10^{18}} = \underline{\hspace{2cm}}$	$48^{-6} = \underline{\hspace{2cm}}$
$\frac{2^{31}}{2^{17}} = \underline{\hspace{2cm}}$	$18^{-13} = \underline{\hspace{2cm}}$	$(6^{12})^7 = \underline{\hspace{2cm}}$	$5^{14} \cdot 5^{18} = \underline{\hspace{2cm}}$

Challenge! Simplify each expression using the properties of exponents. Write the answer as a single term with a positive exponent.

$\frac{9^1}{9^4} = \underline{\hspace{2cm}}$	$\frac{25^5}{25^3} \cdot 25^6 = \underline{\hspace{2cm}}$	$\frac{(7^3)^4}{7^5} = \underline{\hspace{2cm}}$
$(4^{-3})^2 = \underline{\hspace{2cm}}$	$5^8 \cdot (5^5)^2 = \underline{\hspace{2cm}}$	$\frac{6^{12} \cdot 6^{15}}{6^4} = \underline{\hspace{2cm}}$