

## Exponent Rules

$x^m x^n =$	$(x^m)^n =$	$(xy)^n =$	$\left(\frac{x}{y}\right)^n =$	$\frac{x^m}{x^n} =$
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**Simplify. State the rule(s) you used, show your work, and write your final answer in the spaces provided.**

	<b>Rule(s)</b> <i>There may be more than one!</i>	<b>Work</b>	<b>Answer</b>
Example: $(2x^2)^3$	$(xy)^n = x^n y^n$ and $(x^m)^n = x^{m \cdot n}$	$(2x^2)^3$ $= 2^3 (x^2)^3$ $= 2^3 x^{2 \cdot 3}$ $= 8x^6$	$8x^6$
1) $(3x^5y^2)^3$			
2) $5x^6y(3x^3y^5)^2$			
3) $(b^5c^2)^3(b^4c^8)^5$			
4) $\frac{12x^3x^5}{8x^2}$			
5) $\left(\frac{x^5}{2y}\right)^4$			
6) $\left(\frac{4x^7}{3y^5w}\right)^3$			
7) $\frac{(2ab^5)^4}{8a^3b^9}$			