

MasterMath

Exponents

Name _____

Date _____

1. Fill in the blank cell

Exponential Form	Numerical Form
6^3	216
$(-8)^4$	4,096
3^{-3}	1/27
$\frac{1}{3}^4$	1/81
$2^3 * 3^2$	72
$5^2 * 3^5$	6,075
$5^2 * 5^{-2}$	1
$5^3 * 5^{-2}$	5

Exponential Form	Numerical Form
$6^3 * 3$	648
$2 * (-5)^3$	-250
$12 * 2865^0$	12
$3 * 7^2$	147
$4 * (-6)^3$	-864
$5 * 7^2 + 3$	248
$2^3 * 5^2$	200
$3^3 * 7^2$	441

2. Convert these expressions to exponential expressions

Expression	Exponential Expression
$\pi * \pi * \pi * \pi * \pi * \pi * 3 * 3$	$\pi^6 * 3^2$
an exponent of 4 and a base of 3	3^4
72	$3^2 * 2^3$
1/8	2^{-3}
1/9	3^{-2}
2700	$5^2 * 2^2 * 3^3$

3. This pitcher holds 2 gallons. 4 people, each in turn, are allowed to take half of the liquid that is left in the pitcher. Write and solve an expression to determine how much water is left after the 4th person removes her portion.



Expression	Solution
$2(\frac{1}{2})^4$	1/8