

Exponent Properties

Name: \_\_\_\_\_

Directions: Compare the mathematical expressions below. Indicate  $>$ ,  $<$ ,  $=$ , or not enough information (NEI) in the box provided. If the answer is NEI, use the back of this sheet to explain what information is needed to determine  $>$ ,  $<$ ,  $=$ .

1)	$a^2$		$a$
2)	$a^2$		$a \cdot a$
3)	$a \cdot a$		$2a$
4)	$x^2$		$y^2$
5)	$q^2$		$q^2$
6)	$\frac{2}{1}$		$\frac{1}{2}$
7)	$x^2$		$x^{-2}$
8)	$d^3$		$\frac{1}{d^3}$
9)	$x^0, \text{ if } x \neq 0$		1
10)	$x^1$		$y^1$
11)	$3^5$		243
12)	$x^0, \text{ if } x \neq 0$		$y^0, \text{ if } y \neq 0$
13)	$0^n, \text{ if } n > 0$		$0^q, \text{ if } q > 0$
14)	$x^1$		$y^{-1}$

## Exponent Properties (Answer Key)

1)	$a^2$	NEI	$a$
2)	$a^2$	=	$a \cdot a$
3)	$a \cdot a$	NEI	$2a$
4)	$x^2$	NEI	$y^2$
5)	$q^2$	=	$q^2$
6)	$\frac{2}{1}$	>	$\frac{1}{2}$
7)	$x^2$	NEI	$x^{-2}$
8)	$d^3$	=	$\frac{1}{d^3}$
9)	$x^0, \text{ if } x \neq 0$	=	1
10)	$x^1$	NEI	$y^1$
11)	$3^5$	=	243
12)	$x^0, \text{ if } x \neq 0$	=	$y^0, \text{ if } y \neq 0$
13)	$0^n, \text{ if } n > 0$	=	$0^q, \text{ if } q > 0$
14)	$x^1$	NEI	$y^{-1}$