

EXPONENT REVIEW

Name:

Date:

Period:

J	N	I	F	P	O	E	B	Q
D	P	C	O	A	E	I	L	H
A	M	R	F	V	R	E	A	O
F	J	N	M					
M	J	R	H	R				
C	R	M	E	R	M	P	C	F
I	L	F	A	I	C	L	O	I
A	P	E	O	I		P	A	C
C	F				F	O	L	F
I	O	P	L	C	A	E	P	I

A	$27b^9$	J	x^3
B	$-\frac{2p}{p^2}$	K	$10a^4b$
C	$\frac{2x}{y^2}$	L	$-\frac{1}{p}$
D	$20m^{15}$	M	$20x^5y^3$
E	$-x^3$	N	$8x^4y^8$
F	$-\frac{b}{4}$	O	$3xy$
G	$20m^8$	P	$-\frac{m}{3}$
H	$7a^4b$	Q	$2xy^2$
I	$-27x^3$	R	$16x^4y^8$

Simplify. Your answer should contain only positive exponents.

black

1) $4m^5n^0 \cdot 5m^3$ $20m^8$ G

black

2) $5ab \cdot 2a^3$ $10a^4b$ K

grey

3) $5x^5 \cdot 4y^3$ $20x^5y^3$ M

grey

4) $(4x^2y^4)^2$ $4^2x^4y^8$ or $16x^4y^8$ R

yellow

5) $(3b^3)^3$ 3^3b^9 or $27b^9$ A

yellow

6) $(-3x)^3$ $(-3)^3x^3$ or $-27x^3$ I

yellow

7) $\frac{m^2n^2}{3mn^2}$ $-\frac{m}{3}$ P

yellow

8) $\frac{-3x^2y^2}{-xy}$ $3xy$ O

yellow

9) $\frac{2yx^3}{x^2y^3}$ $\frac{2x}{y^2}$ C

yellow

10) $\frac{b^2 \cdot b^3}{(2b^2)^2}$ $\frac{-b^5}{2^2b^4} = -\frac{b}{4}$ F

yellow

11) $\frac{3x \cdot (-x)^3}{3x}$ $\frac{-3x^4}{3x} = -x^3$ E

yellow

12) $\frac{2p^2}{-2p \cdot (-p)^2}$ $\frac{2p^2}{-2p^3} = -\frac{1}{p}$ L

Properties of Exponents

Date _____ Period _____

Simplify. Your answer should contain only positive exponents.

$$1) 2m^2 \cdot 2m^3$$

$$\frac{2^2 m^5}{4m^5}$$

or

$$\frac{2^2 m^5}{4m^5}$$

$$2) m^4 \cdot 2m^{-3}$$

$$\frac{2m^4}{m^3} = 2m$$

$$3) 4r^{-3} \cdot 2r^2$$

$$\frac{8r^2}{r^3} = \frac{8}{r}$$

$$4) 4n^4 \cdot 2n^{-3}$$

$$\frac{8n^4}{n^3} = 8n$$

$$5) 2k^4 \cdot 4k$$

$$8k^5$$

$$6) 2x^3y^{-3} \cdot 2x^{-1}y^3$$

$$\frac{2^2 x^3 y^3}{y^3 x} = 2^2 x^2 = 4x^2$$

or $4x^2$

$$7) 2y^2 \cdot 3x$$

$$6xy^2$$

$$8) 4v^3 \cdot vu^2$$

$$4v^4u^2$$

$$9) 4a^3b^2 \cdot 3a^{-4}b^{-3}$$

$$\frac{12a^3b^2}{a^4b^3} = \frac{12}{ab}$$

$$10) x^2y^{-4} \cdot x^3y^2$$

$$\frac{x^2x^3y^2}{y^4} = \frac{x^5}{y^2}$$

$$11) (x^2)^0$$

$$1$$

$$12) (2x^2)^{-4}$$

$$2^{-4}x^{-8} = \frac{1}{2^4x^8}$$

$$13) (4r^0)^4$$

$$4^4r^0 = 4^4$$

$$14) (4a^3)^2$$

$$4^2a^6 = 16a^6$$

$$15) (3k^4)^4$$

$$3^4k^{16}$$

$$16) (4xy)^{-1}$$

$$4^{-1}x^{-1}y^{-1} = \frac{1}{4xy}$$