

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $(6w^5)^3 =$ _____

2) $(9x^5)^2 =$ _____

3) $(3b^2 \cdot 2b \cdot 2b^3)^2 =$ _____

4) $(6n^3 \cdot 2n^5)^3 =$ _____

5) $(4r^3 \cdot 2r^3)^2 =$ _____

6) $(p^4 \cdot 2p^2 \cdot 5p^2)^3 =$ _____

7) $(3x^3 \cdot 4x^2)^2 =$ _____

8) $(3b^3 \cdot 3b^4)^4 =$ _____

9) $(y \cdot 4y^2)^3 =$ _____

10) $(3n^4 \cdot 4n \cdot 6n)^5 =$ _____

11) $(4c \cdot 2c^3 \cdot c^3)^2 =$ _____

12) $(4n \cdot 5n^3 \cdot 7n)^6 =$ _____

13) $(3d^2 \cdot d^3 \cdot 4d)^3 =$ _____

14) $(4n \cdot 2n^3)^2 =$ _____

15) $(6y^6x)^4 =$ _____

16) $(9x^6y^4)^4 =$ _____

17) $(4r^2 \cdot r)^3 =$ _____

18) $(4h^2 \cdot h^3)^3 =$ _____

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Rewrite each expression using product rule.

$$1) (6w^5)^3 = \underline{216w^{15}}$$

$$2) (9x^5)^2 = \underline{81x^{10}}$$

$$3) (3b^2 \cdot 2b \cdot 2b^3)^2 = \underline{144b^{12}}$$

$$4) (6n^3 \cdot 2n^5)^3 = \underline{1728n^{24}}$$

$$5) (4r^3 \cdot 2r^3)^2 = \underline{64r^{12}}$$

$$6) (p^4 \cdot 2p^2 \cdot 5p^2)^3 = \underline{1000p^{24}}$$

$$7) (3x^3 \cdot 4x^2)^2 = \underline{144x^{10}}$$

$$8) (3b^3 \cdot 3b^4)^4 = \underline{6561b^{28}}$$

$$9) (y \cdot 4y^2)^3 = \underline{64y^9}$$

$$10) (3n^4 \cdot 4n \cdot 6n)^5 = \underline{72^5 n^{30}}$$

$$11) (4c \cdot 2c^3 \cdot c^3)^2 = \underline{64c^{14}}$$

$$12) (4n \cdot 5n^3 \cdot 7n)^6 = \underline{140^6 n^{30}}$$

$$13) (3d^2 \cdot d^3 \cdot 4d)^3 = \underline{1728d^{18}}$$

$$14) (4n \cdot 2n^3)^2 = \underline{64n^8}$$

$$15) (6y^6x)^4 = \underline{1296y^{24}x^4}$$

$$16) (9x^6y^4)^4 = \underline{6561x^{24}y^{16}}$$

$$17) (4r^2 \cdot r)^3 = \underline{64r^9}$$

$$18) (4h^2 \cdot h^3)^3 = \underline{64h^{15}}$$