

Exponents Rules

Name: _____

Date: _____

Rewrite each expression using product rule.

1) $(b^2 \cdot 5b^2)^2 =$ _____

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

3) $(2w^3 \cdot 2w^3)^5 =$ _____

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

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

6) $(3r^2s^2)^4 =$ _____

7) $(2s^2 \cdot s^2 \cdot s)^3 =$ _____

8) $(2b^3 \cdot 2b^2)^3 =$ _____

9) $(3p \cdot p^2 \cdot p^2)^5 =$ _____

10) $(3n^2 \cdot 3 \cdot n)^2 =$ _____

11) $(3r^3 \cdot r \cdot 2r)^2 =$ _____

12) $(m^2n^3)^2 =$ _____

13) $(2m^4 \cdot 2^2)^2 =$ _____

14) $(4r^3)^3 =$ _____

15) $(4p^3 \cdot p^2 \cdot p)^4 =$ _____

16) $(rs^4 \cdot r^2s^4)^2 =$ _____

17) $(9m^2n^2)^2 =$ _____

18) $(s^2 \cdot s^3 \cdot 7s^2)^3 =$ _____

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Rewrite each expression using product rule.

$$1) (b^2 \cdot 5b^2)^2 = \underline{25b^8}$$

$$2) (d^3 \cdot d^3 \cdot d^2)^3 = \underline{d^{24}}$$

$$3) (2w^3 \cdot 2w^3)^5 = \underline{1024w^{30}}$$

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

$$5) (2p^2 \cdot 3p^2)^4 = \underline{1296p^{16}}$$

$$6) (3r^2s^2)^4 = \underline{81r^8s^8}$$

$$7) (2s^2 \cdot s^2 \cdot s)^3 = \underline{8s^{15}}$$

$$8) (2b^3 \cdot 2b^2)^3 = \underline{64b^{15}}$$

$$9) (3p \cdot p^2 \cdot p^2)^5 = \underline{243p^{25}}$$

$$10) (3n^2 \cdot 3 \cdot n)^2 = \underline{81n^6}$$

$$11) (3r^3 \cdot r \cdot 2r)^2 = \underline{36r^{10}}$$

$$12) (m^2n^3)^2 = \underline{m^4n^6}$$

$$13) (2m^4 \cdot 2^2)^2 = \underline{64m^8}$$

$$14) (4r^3)^3 = \underline{64r^9}$$

$$15) (4p^3 \cdot p^2 \cdot p)^4 = \underline{256p^{24}}$$

$$16) (rs^4 \cdot r^2s^4)^2 = \underline{r^6s^{16}}$$

$$17) (9m^2n^2)^2 = \underline{81m^4n^4}$$

$$18) (s^2 \cdot s^3 \cdot 7s^2)^3 = \underline{343s^{21}}$$