

# Exponents Rules

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

Date: \_\_\_\_\_

Rewrite each expression using product rule.

1)  $(4x^3 \cdot 2x^2 \cdot 2x)^2 =$  \_\_\_\_\_

2)  $(7y^3 \cdot 5y^3)^3 =$  \_\_\_\_\_

3)  $(3y^2 \cdot 4y \cdot 6y^3)^3 =$  \_\_\_\_\_

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

5)  $(5a^3 \cdot 4a^3)^4 =$  \_\_\_\_\_

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

7)  $(4n^2 \cdot 3n^2 \cdot 2n^2)^2 =$  \_\_\_\_\_

8)  $(2b^3 \cdot 3b^4)^4 =$  \_\_\_\_\_

9)  $(rs^4 \cdot r^2s^4)^2 =$  \_\_\_\_\_

10)  $(6m^3 \cdot m \cdot 3)^3 =$  \_\_\_\_\_

11)  $(3b^5 \cdot 2b \cdot 3b)^2 =$  \_\_\_\_\_

12)  $(12m^3n^3)^2 =$  \_\_\_\_\_

13)  $(6m^3 \cdot 2m^4)^2 =$  \_\_\_\_\_

14)  $(11r^4)^3 =$  \_\_\_\_\_

15)  $(5p^3 \cdot 2p^2 \cdot p)^4 =$  \_\_\_\_\_

16)  $(4x^5 \cdot 3x^5)^2 =$  \_\_\_\_\_

17)  $(4y^3 \cdot 3y^3 \cdot 6y^2)^2 =$  \_\_\_\_\_

18)  $(2s^3 \cdot 3s^3 \cdot s^3)^3 =$  \_\_\_\_\_

# Exponents Rules

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

Date: \_\_\_\_\_

Rewrite each expression using product rule.

$$1) (4x^3 \cdot 2x^2 \cdot 2x)^2 = \underline{256x^{12}}$$

$$2) (7y^3 \cdot 5y^3)^3 = \underline{35^3y^{18}}$$

$$3) (3y^2 \cdot 4y \cdot 6y^3)^3 = \underline{72^3y^{18}}$$

$$4) (2n^3 \cdot 2n^2)^5 = \underline{1024n^{25}}$$

$$5) (5a^3 \cdot 4a^3)^4 = \underline{20^4a^{24}}$$

$$6) (2p^4 \cdot 3p^2 \cdot p^2)^5 = \underline{6^5p^{40}}$$

$$7) (4n^2 \cdot 3n^2 \cdot 2n^2)^2 = \underline{576n^{12}}$$

$$8) (2b^3 \cdot 3b^4)^4 = \underline{1296b^{28}}$$

$$9) (rs^4 \cdot r^2s^4)^2 = \underline{r^6s^{16}}$$

$$10) (6m^3 \cdot m \cdot 3)^3 = \underline{5832m^{12}}$$

$$11) (3b^5 \cdot 2b \cdot 3b)^2 = \underline{324b^{14}}$$

$$12) (12m^3n^3)^2 = \underline{144m^6n^6}$$

$$13) (6m^3 \cdot 2m^4)^2 = \underline{144m^{14}}$$

$$14) (11r^4)^3 = \underline{1331r^{12}}$$

$$15) (5p^3 \cdot 2p^2 \cdot p)^4 = \underline{10^4p^{24}}$$

$$16) (4x^5 \cdot 3x^5)^2 = \underline{144x^{20}}$$

$$17) (4y^3 \cdot 3y^3 \cdot 6y^2)^2 = \underline{5184y^{16}}$$

$$18) (2s^3 \cdot 3s^3 \cdot s^3)^3 = \underline{216s^{27}}$$