Exponents Rules

Name:_____ Date:_____

Rewrite each expression using product rule.

1) $(5x^4 \cdot 3x^2 \cdot 2x)^3$ = _____

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

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

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

5) $(4w^3 \cdot 3w^3)^5$ = _____

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

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

8) $(2b^2 \cdot 2b^4)^5$ = _____

9) $(rs^3 \cdot r^2s^3)^4$ = _____

10) $(4m^3 \cdot 4m \cdot 4)^3$ = _____

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

12) $(11m^2n^4)^2$ = _____

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

14) $(10r^4)^2$ = _____

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

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

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

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

Exponents Rules

Name:_____ Date:_____

Rewrite each expression using product rule.

1) $(5x^4 \cdot 3x^2 \cdot 2x)^3 = 30^3x^{21}$

2) $(3y^3 \cdot 4y^3)^4 = 12^4y^{24}$

3) $(3z^2 \cdot 2z \cdot 7z^3)^2 = 42^2z^{12}$

4) $(7n^3 \cdot 7n^2)^2 = 7^4n^{10}$

5) $(4w^3 \cdot 3w^3)^5 = 12^5w^{30}$

6) $(2p^4 \cdot p^2 \cdot 2p^3)^6 = 2^{12}p^{54}$

7) $(2n^3 \cdot 4n^2 \cdot n^2)^3 = 8^3n^{21}$

8) $(2b^2 \cdot 2b^4)^5 = 2^{10}b^{30}$

9) $(rs^3 \cdot r^2s^3)^4 = r^{12}s^{24}$

10) $(4m^3 \cdot 4m \cdot 4)^3 = 4^9m^{12}$

11) $(2s^3 \cdot 2s \cdot 3s)^3 = 1728s^{15}$

12) $(11m^2n^4)^2 = 121m^4n^8$

13) $(2m^4 \cdot 2m^4)^4 = 2^8m^{32}$

14) $(10r^4)^2 = 10^2r^8$

15) $(4p^3 \cdot 2p^2 \cdot p)^4 = 8^4p^{24}$

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

17) $(2y^3 \cdot 2y^4 \cdot 2y^2)^3 = 2^9y^{27}$

18) $(3s^2 \cdot 3s^4 \cdot s^3)^3 = 3^6s^{27}$