

Name _____

Power of Products

Simplify the expression by using power of product rule.

1) $(2pq)^4 \times (3rs)^2$ and raised to the power of 3. $(2pq)^4 \times (3rs)^2$ $= 16p^4q^4 \times 9r^2s^2 = 144p^4q^4r^2s^2$ Now, raise to the power of 3: $144p^4q^4r^2s^2 = 2985984p^{12}q^{12}r^6s^6$	2) $(3abc)^2 \times (4xyz)^3$ and raised to the power of 3.
3) $(2m^2n)^3 \times (5pq^2)^2$ and raised to the power of 4.	4) $(3uvw)^2 \times (2xyz)^3$ and raised to the power of 3.
5) $(4abc)^3 \times (5xyz)^2$ and raised to the power of 2.	6) $(2mn^2)^3 \times (4p2q)^2$ and raised to the power of 2.
7) $(3a^2b)^2 \times (5cd^2)^3$ and raised to the power of 3.	8) $(2xy^2)^3 \times (3z)^2$ and raised to the power of 2.