

Name _____

Power of Products

Simplify the expression by using power of product rule.

<p>1) $(2pq)^4 \times (3rs)^2$ and raised to the power of 3.</p> <p>$(2pq)^4 \times (3rs)^2$ $= 16p^4q^4 \times 9r^2s^2 = 144p^4q^4r^2s^2$ Now, raise to the power of 3: $144p^4q^4r^2s^2 = 2985984p^{12}q^{12}r^6s^6$</p>	<p>2) $(3abc)^2 \times (4xyz)^3$ and raised to the power of 3.</p> <p>$331776a^4b^4c^4x^6y^6z^6$</p>
<p>3) $(2m^2n)^3 \times (5pq^2)^2$ and raised to the power of 4.</p> <p>$160000000m^{34}n^{12}p^8q^{16}$</p>	<p>4) $(3uvw)^2 \times (2xyz)^3$ and raised to the power of 3.</p> <p>$373248u^6v^6w^6x^9y^9z^9$</p>
<p>5) $(4abc)^3 \times (5xyz)^2$ and raised to the power of 2.</p> <p>$2560000a^6b^6c^6x^4y^4z^4$</p>	<p>6) $(2mn^2)^3 \times (4p2q)^2$ and raised to the power of 2.</p> <p>$16384m^6n^{12}p^8q^4$</p>
<p>7) $(3a^2b)^2 \times (5cd^2)^3$ and raised to the power of 3.</p> <p>$1125a^4b^2c^3d^6$</p>	<p>8) $(2xy^2)^3 \times (3z)^2$ and raised to the power of 2.</p> <p>$5184x^6y^{12}z^4$</p>