

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

## Simplifying Expressions: Exponents

MS5

Simplify each expression.

1)  $(3p^2qr^3)(4p^6q^5r)(3pq^3r^7)$

2)  $\frac{7x^7y^4z^{11}}{63x^6y^2z^5}$

3)  $\frac{28n^7m^9}{14n^7m}$

4)  $(5x^3y^2z^8)(-3u^6v^5)(3vw)$

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7)  $\frac{(8a^8b^6)^2}{16a^6b^7}$

8)  $(3m^4n)^8$

9)  $\frac{9s^6t^5u^2}{(3s^4tu)^3}$

10)  $\frac{28b^{20}c^3}{7b^{13}c}$

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**Answer key**

**Simplifying Expressions: Exponents**

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Simplify each expression.

1)  $(3p^2q^3)(4p^6q^5r)(3pq^3r^7)$

**$36p^9q^9r^{11}$**

2)  $\frac{7x^7y^4z^{11}}{63x^6y^2z^5}$

**$-\frac{1}{9}xy^2z^6$**

3)  $\frac{28n^7m^9}{14n^7m}$

**$2m^8$**

4)  $(5x^3y^2z^8)(-3u^6v^5)(3vw)$

5)  $(s^5t^6u)^2(3st^7u^8)$

**$27s^{15}t^{21}u^{16}$**

7)  $\frac{(8a^8b^6)^2}{16a^6b^7}$

**$4a^{10}b^5$**

8)  $(3m^4n)^8$

9)  $\frac{9s^6t^5u^2}{(3s^4tu)^3}$

**$\frac{t^2}{3s^6u}$**

10)  $\frac{28b^{20}c^3}{7b^{13}c}$

**$4b^7c^2$**

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