

Name: _____ Date: _____

Key

Exponent Rules

1. $\frac{x^8}{x^4}$

x^4

2. $\frac{y^4}{y^{-7}}$

y^{11}

3. $(3^2s^3)^6$

$531,441 s^{18}$

4. $(4^0w^2)^{-5}$

$\frac{1}{w^{10}}$

5. $(y^4z^2)(y^{-3}z^{-5})$

$\frac{y}{z^3}$

6. $(2m^3n^{-1})(8m^4n^{-2})$

$\frac{16m^7}{n^3}$

7. $(7c^7d^2)^{-2}$

$\frac{1}{49c^{14}d^4}$

8. $(5g^4h^{-3})^{-3}$

$\frac{1h^9}{125g^{12}}$

9. $\frac{x^5y^{-8}}{x^5y^{-6}}$

$\frac{1}{y^2}$

10. $\frac{16q^0r^{-6}}{4q^{-3}r^{-7}}$

$4q^3r$

11. $\frac{12a^{-3}b^9}{21a^2b^{-5}}$

$\frac{4b^{14}}{7a^5}$

12. $\frac{8e^{-4}f^{-2}}{18ef^{-5}}$

$\frac{4f^3}{9e^5}$

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Exponent Review

<p>1. $(4a^2)(a^3)(3a^6)$ $12a^{11}$</p>	<p>2. $(e^2f^4)(ef)^2$ e^4f^6</p>
<p>3. $(y^2z)(yz^{-4})$ $\frac{y^3}{z^3}$</p>	<p>4. $(10^2)^{-3}$ $\frac{1}{1,000,000}$</p>
<p>5. $((4^2)^2)^2$ $65,536$</p>	<p>6. $(2x^2)^4(3x^5)^2 = (16x^8)(9x^{10})$ $144x^{18}$</p>
<p>7. $\frac{10x^4y^8}{22x^2y}$ $\frac{5x^2y^7}{11}$</p>	<p>8. $(-6p)^2$ $36p^2$</p>
<p>9. $(4g^3h)(-2g)^5$ $(4g^3h)(-32g^5)$ $-128g^8h$</p>	<p>10. $(2ab^2c^2)(4a^3b^2c^2)$ $8a^4b^4c^4$</p>
<p>11. $-6(x^2y^3)^4$ $-6x^8y^{12}$</p>	<p>12. $\frac{14g^{-5}h^{-2}j^6}{28g^{-7}h^4j^{-1}}$ $\frac{1g^2j^7}{2h^6}$</p>
<p>13. $-\frac{3r}{5}(15r^2)$ $-\frac{45r^3}{5}$ $-9r^3$</p>	<p>14. $\frac{(x^4y)(xy^7)}{x^5y^{11}} = \frac{x^5y^8}{x^5y^{11}} = \frac{1}{y^3}$</p>
<p>15. $(\frac{1}{4}cd^{-3})^{-2}$ $\frac{16d^6}{c^2}$</p>	<p>16. $\frac{(2m^4n)^3}{-10m^8n^3}$ $\frac{8m^{12}n^3}{-10m^8n^3}$ $\frac{4m^4}{-5}$</p>