

Name: _____

Period: _____ Date: _____

Exponent Rules Answers

Section I. Simplify each expression. Leave all answers with positive exponents. Be careful, the problems in each row are similar, so look at each one carefully.

1. $k^7 \cdot k^2$

k^9

2. $4k^7 \cdot 5k^2$

$20k^9$

3. $4k^7m^2 \cdot 5k^2m^4$

$20k^9m^6$

4. $(4k^7)^2 \cdot (5k^2)^3$

$2,000k^{20}$

5. $\frac{y^8}{y^3}$

y^5

6. $\frac{15y^8}{27y^3}$

$\frac{5y^5}{9}$

7. $\frac{15y^8z^4}{27y^3z^{12}}$

$\frac{5y^5}{9z^8}$

8. $\frac{15y^8(z^4)^4}{27(y^3)^3z^{12}}$

$\frac{5z^4}{9y}$

7. $(3a)^3$

$27a^3$

8. $(3a^5b^3)^3$

$27a^{15}b^9$

9. $(3a^5b^3)^3 \cdot (2a^4)^5$

$864a^{35}b^9$

10. $(3a)^0$

1

10. $(7h^8)^2$

$6x^8$

11. $\frac{(7h^8)^2}{7h^3}$

$432x^{26}$

12. $\left(\frac{7h^8}{7h^3}\right)^2$

$36x^{16}$

13. $(-7h^8)^0$

$-72x^5$

13. $2x^2 \cdot 3x^6$

$(-3)^7$

14. $(2x^2)^4 \cdot (3x^6)^3$

1

15. $(2x^2 \cdot 3x^6)^2$

$\frac{-27x^3}{8y^3}$

16. $(-2x)^3 \cdot (3x)^2$

$\frac{-27x^{12}}{8y^{15}}$

