

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.  $k^7 \times k^2$

$k^9$

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

$20k^9$

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

$20k^9m^6$

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

$y^5$

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

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

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

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

7.  $(3a)^3$

$27a^3$

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

$27a^{15}b^9$

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

$864a^{35}b^9$

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

$49h^{16}$

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

$7h^{13}$

12.  $\frac{7h^8 \cdot 0^2}{7h^3 \cdot 0}$

$h^{10}$

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

$6x^8$

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

$432x^{26}$

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

$36x^{16}$