

# EXERCISES

Simplify each expression. Use only positive exponents.

1.  $(3a^2)(4a^6)$

$12a^8$

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

$8y^{12}/x^{15}$

7.  $\frac{(4x^2)^0}{2xy^5}$

$1/2xy^5$

10.  $(3x^4y^5)^{-3}$

$1/27x^{12}y^{15}$

13.  $\frac{x^4x^{-2}}{x^{-5}}$

$x^7$

16.  $\frac{4x^3}{2x}$

$2x^2$

19.  $\frac{r^2s^3t^4}{r^2s^4t^{-4}}$

$t^8/s$

22.  $(3x^{-3}y^{-2})^{-2}$

$x^6y^4/9$

2.  $(-4x^2)(-2x^{-2})$

8

5.  $\frac{8a^5}{2a^2}$

$4a^3$

8.  $(\frac{3x^2}{2})^2$

$9x^4/4$

11.  $\frac{(2r^{-1}s^2t^0)^{-2}}{2rs}$

$r/8s^5$

14.  $\frac{(12x^2y^6)^2}{8x^4y^7}$

$18y^5$

17.  $(p^2)^{-2}$

$1/p^4$

20.  $\frac{xy^2}{2} \cdot \frac{6x}{y^2}$

$3x^2$

23.  $(h^4k^5)^0$

1

3.  $(4x^3y^5)^2$

$16x^6y^{10}$

6.  $\frac{6x^7y^5}{3x^{-1}}$

$2xy^5$

9.  $(-6m^2n^2)(3mn)$

$-18m^3n^3$

12.  $x^5(2x)^3$

$8x^8$

15.  $(4p^2q)(p^2q^3)$

$4p^4q^3$

18.  $\frac{-15x^4}{3x}$

$-5x^3$

21.  $(s^2t)^3(st)$

~~$s^7p^4st$~~   
 $s^7t^4$

24.  $\frac{s^2t^3}{r} \cdot \frac{sr^3}{t}$

$r^2s^3t^2$