

HW 4-6 More Negative Exponents

Simplify the following expressions. Express all your answers with positive exponents.

1. $\frac{a^3}{a^{-2}}$ a^5

8. $(m^{-2})^{-6}$

2. $\frac{b^{-4}}{b^5}$

9. $\left(\frac{1}{a^{-2}}\right)^{-5}$ $\frac{1}{a^{10}}$

3. $\frac{c^{-6}}{c^{-2}}$ $\frac{1}{c^4}$

10. $3^{-1}w^0$

4. $d^{-4} \cdot d^7$

11. $\frac{3x^{-2}y}{xy}$ $\frac{3}{x^3}$

5. $e^{-2} \cdot e^{-5}$ $\frac{1}{e^7}$

12. $(-3x^{-1}y^2)^2$

6. $f^3 \cdot f^{-9}$

13. $\frac{b^{-3}b^{-6}}{b^{-9}}$ 1

7. $(5^{-3})^{-2}$ 5^6

14. $2b^3b^{-4}$

Simplify the following expressions. Express all your answers with positive exponents.

$$15. (x^4)^{-9} \quad \frac{1}{x^{36}}$$

$$23. \left(\frac{2a}{9c}\right)^{-2} \quad \frac{81c^2}{4a^2}$$

$$16. (3m^4m^{-3})^2$$

$$24. \frac{(ab)^{-1}}{cd^{-2}}$$

$$17. 3a^0b^{-2} \quad \frac{3}{b^2}$$

$$25. \frac{12de^2}{4d^{-1}e^{-4}} \quad 3d^2e^6$$

$$18. \frac{fg^{-1}}{9h^{-2}}$$

$$26. \frac{3b}{-5c^{-1}}$$

$$19. \frac{4rs^{-2}}{-3t^{-2}} \quad \frac{4rt^2}{-3s^2}$$

$$20. c^3d^2e^{-1}$$

$$21. (-17.4b^{-15}y^4u^3)^0 \quad 1$$

$$22. \frac{35x^3y^9}{7x^{-2}y^7}$$