

Exponents: From book.

Page 38 (a) $8^{-3} \cdot 8^7 = 8^4 = \boxed{4096}$

(b) $(-3x^{-4})(25x^{-10}) = \boxed{-75x^{-14}}$

(c) $(5x^{-3}y^4)(-2x^{-9}y^{-2}) = \boxed{-10x^{-12}y^2}$

Page 39 (f) $\frac{10^{-2}}{10^{-8}} = \boxed{10^6}$

(h) $\frac{33a^5b^{-2}}{22a^7b^{-4}} = \frac{3}{2}a^{-2}b^2 = \boxed{\frac{3b^2}{2a^2}}$

Page 40 (n) $(-2x^4y^2)^5 = (-2)^5 \cdot x^{20} \cdot y^{10} = \boxed{-32x^{20}y^{10}}$

Page 43 (25) $\frac{9a^2}{(-3a)^2} = \frac{9a^2}{9a^2} = \boxed{1}$

(35) $(4^3)^2 = 4^6$

(31) $\frac{20x^{6a}}{-2x^a} = \boxed{-10x^{5a}}$

(45) $\left(\frac{2x^3y^{-2}}{3y^{-3}}\right)^3 = \frac{2^3x^9y^{-6}}{3^3y^{-9}} = \frac{8x^9y^3}{27}$