3 - 8
Laws of Exponents

Product Rule

$$a^m \cdot a^n = a^{m+n}$$

Ex: $2^2 \cdot 2^3 = 2^5$

Ex: $x^3 \cdot x^5 = x^8$

Quotient Rule

$$a^m \div a^n = a^{m-n}$$

Ex: $10^3 \div 10^1 = 10^2$

Ex: $7^8 \div 7^4 = 7^4$

Power Rule

$$(a^m)^n = a^{mn}$$

Ex: $(4^2)^3 = 4^6$

Ex: $(5^3)^4 = 5^{12}$

In-Class Work:

p.138 #16 - 46 even

$$\frac{x^5}{x^3}$$

$$x^5 \div x^3 \quad \boxed{x^2}$$