

## 2-2 Simplifying and Adding Like Terms

**When adding or subtracting** numbers and variables, you add or subtract the coefficients of the variables only.

$$6x + -7x = -1x$$

$$x(6 + -7) = -1x$$

**You never change the variables or their powers!** To add or subtract, like terms must have the same variable AND the same power of that variable.

$$\text{YES } 2a^1 + 5a^1 = 7a^1$$

$$\text{NO } 2a + 5a \neq 7a^2$$

**Positive + Positive** means you **ADD** and answer is **Positive**

$$P + P = P$$

**Negative + Negative** means you **ADD**; answer is **Negative**

$$N + N = N$$

**BUT Positive + Negative OR Negative + Positive** means you **SUBTRACT** the numbers **logically** without worrying about their signs and **give the answer the sign of the number that is farthest from zero!**

**P + N** subtract logically and give the answer the same sign as the largest absolute valued number.

$$-7 + 9 = 2 \quad -7 + 4 = -3 \quad -7 + -5 = -12 \quad 6 + -9 = -3$$

$$9-7=2 \quad 7-4=3 \quad -12 \quad 9-6=3$$

$$2x + 5x + 1 =$$

$$3b + 2 + 5b =$$

Find the Perimeter of the objects.

