

### Evaluating Expressions

**P**  
**E**  
**M** → **D**  
**A** → **S**

**What are we Doing?**

When we evaluate an expression we are finding the answer to the expression when a value is given to plug in for the variable.

- Ex:

$$2-x+5 \quad 2x+5 \quad \text{when } x=2$$

$$2(2)+5$$

$$4+5$$

$$9$$

### Evaluating vs. Solving

- Evaluating
  - The value to plug in for the variable is given to you.
- Solving
  - There are equal signs
  - YOU are solving for the variable

### Evaluating Expressions

- When plugging in a number for a variable put it in parenthesis

- Ex:  $2x+5$ , when  $x=3$

$$2(3)+5$$

$$6+5$$

$$11$$

~~P~~  
~~E~~  
~~M~~ → **D**  
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### Don't Forget Order of Operations

$2x^2 + 3x$ , When  $x=1/2$

$$2\left(\frac{1}{2}\right)^2 + 3\left(\frac{1}{2}\right)$$

$$2\left(\frac{1}{4}\right) + 3\left(\frac{1}{2}\right)$$

$$\frac{2}{1} \cdot \frac{1}{4} = \frac{2}{4} = \frac{1}{2} \quad \frac{1}{2} + 3\left(\frac{1}{2}\right)$$

$$\frac{1}{2} + \frac{3}{2} = \frac{4}{2} = 2$$