Warm Up - October 4th
complete on your board - make sure your homework
(including scratch work are on your desk)

$(3y^2 + 5y - 6) + (7y^2 - 9)$

$3y^2 + 5y - 6 + 7y^2 - 9$

$10y^2 + 5y - 15$

$(3x^3 + 4x^2) - 1(2x^3 + 3x^2 - x)$

$3x^3 + 4x^2 - 2x^3 - 3x^2 + x$

$1x^3 + 1x^2 + x$

$x^3 + x^2 + x$

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$$(-4 - 10x + 6x^4) - 1(2x - 3)$$

$$-4 - 10x + 6x^4 - 2x + 3$$

$$-1 - 12x + 6x^4$$

$$6x^4 - 12x - 1$$

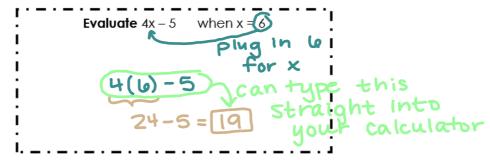Foundations of Algebra   Unit 4

Day 4: Evaluating Expressions

When you **evaluate** an expression, you are replacing the variable with what the variable equals:

Evaluate $4x - 5$ when $x = 6$

plug in 6 for x

$4(6) - 5$

can type this straight into your calculator

$24 - 5 = \boxed{19}$

Practice: Evaluate the following expressions if $m = 7$, $r = 8$, and $t = -2$.

a. $5m - 6$

plug in 7

$5(7) - 6$

$\boxed{29}$

b. $\dfrac{r}{t}$

$\dfrac{(8)}{(-2)}$

$\boxed{-4}$

c. $3m - 5t$

$3(7) - 5(-2)$

$\boxed{31}$

d. $t^2 - 4r$

$(-2)^2 - 4(8)$

$\boxed{-28}$

Application: Answer the following questions:

1. You earn $\boxed{15n}$ dollars for mowing $\boxed{n}$ lawns. → # of lawns
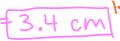
total $ earned

   a. How much do you earn for mowing 1 lawn?

   $15

   b. How much do you earn for mowing $\boxed{9}$ lawns? → plug in 9 for n

   $15(9) = \$135$

2. After $\boxed{m}$ months, the length of a fingernail $\boxed{\text{is } 10 + 3m}$ millimeters. → total length (mm)

# of months

   a. How long is the fingernail, in <u>centimeters</u>, after $\boxed{8 \text{ months?}}$ → plug in for m

   $10 + 3(8) = 34 \text{ mm} = \boxed{3.4 \text{ cm}}$ KHDUDCM
                                                              1 left

   b. How long is the fingernail after <u>three years</u>?

   $\cancel{10 + 3(3)}$ 3 months $3 \cdot 12 = 36$ months

   $10 + 3(36) = \boxed{118 \text{ mm}}$

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