Warmup 5/(# of days until Daysia's birthday)
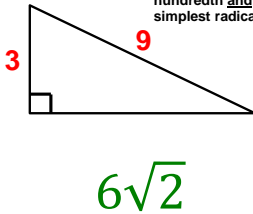
Simplify:

1) $4x - 3y + 18 - x + 8y$

2) $-a + 9b - 20b - 5b$

3) $4 - 6 - 12$

4) $-18 - (-7)$
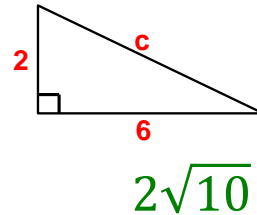
Quiz Review

Find the missing side.

Give an estimate to the nearest hundredth **and the exact answer in simplest radical form.**

3 **9**

$6\sqrt{2}$

Find the missing side

Give an estimate to the nearest hundredth **and the exact answer in simplest radical form.**
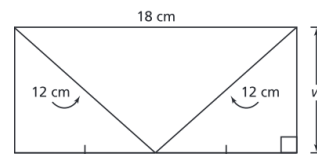
2 **c**

6

$2\sqrt{10}$

Margaret and Megan leave from school at the same time. Margaret travels 3 miles due north and Megan travels 6 miles due west. How far apart are they after their travels? Give your answer as a radical expression in simplest form.

$3\sqrt{5}$ *miles*

Ellis designed a rectangular envelope using these measurements. What is *w*, the width in centimeters?

18 cm

12 cm   12 cm   *w*

$3\sqrt{7}$ *cm*

Table of Contents

Adding & Subtracting Polynomials [11]

Objectives:]
Learn what a polynomial is
Add and subtract polynomials together

What is a polynomial?

- **Polynomial** comes from *poly-* (meaning "many") and *-nomial* (in this case meaning "term") ... so it says "many terms"
- A polynomial can have constants, variables and exponents, but never division by a variable.
- Examples:
- $2x^2 - 5x + 72$
- $x - 2$
- $3xyz - 42y^5 + .1x^3z^6 + 7.4xy^2z$

Like Terms

- What are like terms???

- Why in the world can we "combine like terms"???

How could you add these?

- $(5x^3 + 4x^2) + (x^3 + 7x^2)$

How could you add these?

Adding Polynomials
- Combine like terms
- Keep exponents the same!

Adding Example
- $(3d - d^2 - 8) + (4d^2 + 2d)$

$= 3d^2 + 5d - 8$

Subtracting?

- $(5x^3 + 4x^2) - (x^3 - 7x^2)$

- The easiest way to subtract polynomials and not make a mistake is to change it to **adding the opposite**

How could you add these?

Subtracting Polynomials
  - Change it to adding the opposite of the second polynomial

Subtracting Example
- $(4m^3 - 9m^2 + m) - (-5m^3 + 7m - 6)$
$= (4m^3 - 9m^2 + m) + (+5m^3 - 7m + 6)$

$= 9m^3 - 9m^2 - 6m + 6$

Another way to show it…

Line up the polynomials **vertically** so that the like terms line up!
- $(4m^3 - 9m^2 + m) - (-5m^3 + 7m - 6)$

$(4m^3 - 9m^2 + m \qquad)$
$-(-5m^3 \qquad + 7m - 6)$

Classwork/Homework (Due Monday)

- Adding/Subtracting Worksheet