Warm up sheets by the door. Sit anywhere.

1. Fill in your **name** and **Week 1** at the top of the page, then flip it over to the Wednesday space.

2. Take a minute to tell me if you have any concerns about this class or have a particular seating request. Table groups will be assigned for next Monday. I will generally try to assign new groups each chapter so you have a chance to work with a variety of people.
Welcome to Precalculus!
Make a special note of my blog - you are going to want to check in to it frequently, so make sure that you have it.

You can get to it from a link from the SEHS home page.

http://blogs.4j.lane.edu/torrence_t/

Edmodo - code to join is aua6b2
Notation Activity:

Using the notation summary guide, work in pairs at your table group on the notation worksheet.

After a while I will ask you to check in with the other pair at your table group to carefully compare the details of your answers and finish as a group.

All 4 group member names go on your worksheet, with your name at the top.

I will briefly put up the answers for one last chance to fix up any details.

As a group, decide which worksheet will be easiest for me to read and staple that one at the top of the other three and turn them in.

I grade the top paper and that score goes to everyone in the group.
Check the details of your answers:

How would you write the following in set notation?

1. \( \{ x : -2 \leq x < 10 \} \)
2. \( \{ x : x \leq 5 \} \)
3. \( \{ x : 6 \leq x < 14 \} \)
4. \( (-3, \infty) \)
5. \( (-\infty, 2] \)
6. \( [4, 10] \)

How would you write the following in interval notation?

7. \([-1, 5]\)
8. \((-1, \infty)\)
9. \([0, 10)\)
10. \(x \geq 7\)
11. \(\{ x \mid x < 9 \}\)
12. \(\{ x : 1 < x \leq 4 \}\)
Graph the following on a number line:

13. \((2, 10]\)

14. \(\{x : -1 < x \leq 2\}\)

15. \([1, \infty)\)

Predict what these graphs would look like:

\((U = \text{Union} \quad \cap = \text{Intersection})\)

16. \((-\infty, 2] \cap [-5, \infty)\)

17. \(\{x \mid x < -3\} \cup \{x \mid x > 4\}\)

18. \(\{x : -5 \leq x < 2\} \setminus \{-3\}\)
As a group, decide which worksheet will be easiest for me to read and staple that one at the top of the other three and turn them in. I will grade the top paper and that score goes to everyone in the group.

What's next:
1) Some notes you will need for tonight's assignment
2) 3rd period - 12:05 (You will need student body card or class schedule)
Review Absolute Value:

Using the definition of absolute value as the distance from zero on the real number line:

\[ |x| = 3 \]

means that the value of \( x \) is 3 units from zero on the number line

\[ x = - 3 \text{ or } x = 3 \]
\[ |x + 1| = 3 \]

means that the value of \( x + 1 \) is 3 units from zero on the number line.

\[ x + 1 = -3 \quad \text{or} \quad x + 1 = 3 \]
\[ |x + 1| > 3 \]
means that the value of \( x + 1 \) is more than 3 units from zero on the number line.

\[ x + 1 < -3 \quad \text{or} \quad x + 1 > 3 \]
\[ |x + 1| < 3 \]
means that the value of \( x + 1 \) is less than 3 units from zero on the number line.

\[-3 < x + 1 < 3\]
You try. Answer in both interval and set notation. Graph on a number line.

1. \{x : |x| \leq 10\}  
2. |x + 12| \leq 2  
3. |2x + 6| \geq 10

4. \{x: -2 |10 - 4x| > -6\}
SL Ch. 2  What type of number is $\sqrt{20}$?

$$\sqrt{20} \cdot \sqrt{5} = \sqrt{20} \cdot \sqrt{6} =$$

$$\sqrt{20} = \sqrt{5}$$

$$\sqrt{20} = \sqrt{6}$$

$$\frac{\sqrt{a}}{\sqrt{b}} =$$
\[ \sqrt{20} + \sqrt{5} \ ? \sqrt{25} \]

Combining radicals:

\[ \sqrt{200} - \sqrt{18} = \]
Multiplying expressions with radicals:

\[(\sqrt{2} + \sqrt{3})(\sqrt{6} - \sqrt{3}) = \]

\[\left(\sqrt{5} + \sqrt{2}\right)^2 = \]

recall that \[(a + b)^2 = \]
\[(\sqrt{5} + \sqrt{2})(\sqrt{5} - \sqrt{2}) = \]

These are called **CONJUGATES**

\[(a + b)(a - b) = \]
Dividing expressions: make sure to rationalize the denominator.

\[
\frac{1}{2 + \sqrt{3}}
\]

\[
\frac{1 + \sqrt{2}}{2\sqrt{3} - 1}
\]
HW 1-3: (Week 1, Wednesday)

SL Book  p. 20

#1-4, 5ce, 6b, 7bce, 8, 9

Go get 2 PreCalc books.
Bring only the SL book tomorrow.