CIVIL ENGINEERING PROJECT

1. You may work with a partner or alone. Each group (or person) needs a sheet for measurements and figuring proportions and a meter stick.

2. Draw for your assigned ratio (we will put them all in a box) and write that at the top of the paper. That is the ratio you use to figure out the size of the objects that you draw on the paper.

3. When you do calculations, round answers to the nearest half unit.

For example, an answer of 45.367 would become _____
An answer of 45.29 would become _____
An answer of 45.8 would become _____
Put this rounded answer on the line for units.

4. When you are drawing it is important to make straight lines (use a ruler). **Accuracy matters.** The desks should all be the right distance from each of the walls and from each other.

5. This is worth 50 homework points for each person. Up to 25 points will be given for accuracy of your measurements. Up to 25 points for the lines - are they straight? Is it an accurate drawing of the room?

6. You will have one day of classtime and 2 days out of class to work on this. It should be put in one of your folders and have both names on it if done in a group.

7. Because each group has a different ratio, each drawing will be a different size. If you decide to add more objects that are in the room such as the clock, that will add points to your score. (but the extra objects need to reflect the ratio you have).

8. You may use a calculator to do the work but I need to see the worksheet filled out and the graph paper. Staple them together. Only one person in the group needs to hand this in. I am giving each person one in case you want to work on different parts of the project.

9. The desks are moved each day by Paul when he vacuums, decide which way you want to put the desks on your drawing and be consistent.

Math SCALE PROJECT (Sec 9.6)

Your job is to make a scale drawing of our classroom given a ratio from me. You will be measuring the walls, desks, cabinet, teacher's table, door, window, and white board in centimeters. Then you will convert your measurements to units and transfer this to a scale drawing on graph paper. In order to help you complete this project within the period, you will be recording converting your measurements below. Then whatever is not completed can be done out of class. I will expect one scale drawing from each group of two and this worksheet completed from each person in the group. The symbols for indicating window, door, and whiteboard are given. Do your work on your calculator.

assigned ratio: $\frac{\text{cm}}{\text{units}}$

measurements	**proportion**	**drawing length**
east wall: _____cm	------- = --------	_____ units
west wall: _____cm	------- = --------	_____ units
north wall: _____cm	------- = --------	_____ units
south wall: _____cm	------- = --------	_____ units
front table one way: _____cm	------- = --------	_____ units
front table other way: _____cm	------- = --------	_____ units
student desk one way: _____cm	------- = --------	_____ units

student desk other way: _____cm ------- = -------- _____ units

file cabinet one way: _____cm ------- = -------- _____ units

file cabinet other way: _____cm ------- = -------- _____ units

cabinet one way: _____cm ------- = -------- _____ units

cabinet other way: _____cm ------- = -------- _____ units

doorway width: _____cm ------- = -------- _____ units

whiteboard width: _____cm ------- = -------- _____ units

chimney one way: (North wall) _____cm ------- = ------- _____ units

chimney other way: (East wall) _____cm ------- = ------- _____ units

teacher's desk one way: _____cm ------- = ------- _____ units

teacher's desk other way _____cm ------- = ------- _____ un.

---

distance from wall to desks on one side _____cm ------- = ------- _____ un.

distance from wall to desks on other side _____cm ------- = ------- _____ un.

SYMBOLS FOR WHITE BOARD AND DOOR: