

MEASURING HEADACHES

Your teacher will provide you (or your group) with a box that represents your house. It will have drawings of windows and doors. You plan to paint the outside of your house and need to take some measurements and make some calculations before you buy the paint. Don't forget, you don't have to paint the windows and doors. To help you determine how much paint you need to buy, answer the following questions:

1. Do you need to find the area or the perimeter?
2. What measurements do you need to take?
3. Take the measurements and record your answers. Label which dimension(s) you measured and include units.
4. Make the calculations needed to determine the answer in question 1. Read your answer.

Extensions:

- A) Let the box represent your living room. You need to buy new carpet for the entire room. You need to calculate how much carpet you need before making the purchase. Answer the same set of questions (1-4) as above.
- B) Let the box represent your bedroom. You need to buy wallpaper for the entire room. The salesperson at the store said that if you can calculate the number of square units in the room, then she can tell you how many rolls of wallpaper you need. Answer the same set of questions (1-4) as above.
- C) Use a piece of construction paper to represent the yard area for your pet dog. You need to buy new fencing for the entire yard. You need to take some measurements and make some calculations before buying the fencing. Answer the same set of questions.

Provide various-sized boxes to different students (or group of students). Clearly define windows and doors with a bold marker. Match the difficulty levels to the ability levels of the students/groups. As an additional hands-on activity, have students cover a textbook by taking measurements and calculating the surface area needed to cover the entire book.

[Source from: Connecticut Mastery Test Third Generation Mathematics Handbook, Part 2 Draft, State of Connecticut 2000]