The A.B. GLARE window store also sells drapes. They stock full-length drapes that go down to the floor, as well as window-length drapes that just cover the window.

One day a customer, Ms. Phoebe Tall, came in with a list of the windows for which she needed drapes.

> **Window-length drapes:**
> three 2-by-3-ft windows
> two 3-by-3-ft windows
>
> **Full-length drapes:**
> two 3-by-7-ft door-windows
>
> **Undecided:**
> four 3-by-4-ft windows
> six 3-by-5-ft windows
>
> (The second number
> represents the height.)

The material Ms. Tall selected is priced at $3 per square foot. All her windows (except the door-windows, of course) are 3 feet above the floor.

She asked Lara to help her figure out what the cost of various options would be. She wanted to know the smallest amount she could spend. She also wanted to know how much it would cost if she used full-length drapes for all the "undecided" windows. After listening to Lara's explanations, she revealed that she was planning to spend no more than $800. Figure out what Lara should advise her to do.

1. Figure out the smallest amount Ms. Tall could spend, assuming that all the undecided windows are covered with window-length drapes. (Hint: First find the total area. Drawing sketches might help.)

2. Figure out the largest amount she could spend, assuming that all the undecided windows are covered with full-length drapes.

3. If she were planning to spend no more than $800, how many of the undecided windows could she cover with full-length drapes?

4. **Report** Write a full explanation of the results of your investigation. Include sketches that Lara could use to explain the options to Ms. Tall. Your report should consist of three parts: a problem statement, a detailed explanation, and a conclusion.

5. **Project** Find out how drapes are actually sold, and answer Ms. Tall's questions with information from a store in your area.