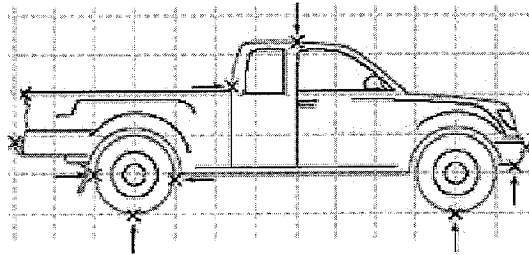


**Practice  
2-5**

**Maps and Scale Drawings**

1. On a map, 1 inch equals 5 miles. Two cities are 8 inches apart on the map. What is the actual distance between the cities?

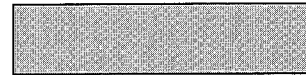
2. What is the actual length of the truck?



1 inch = 1.7 feet

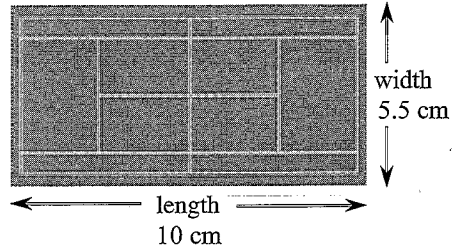
The gridlines are spaced 1 inch apart.

3. You make a scale drawing of a banner for a school dance. You use a scale of 1 inch = 3 feet. What is the actual width of the banner?

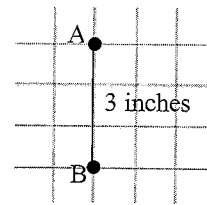


width = 5 inches

4. The scale drawing is of a backyard tennis court. The scale is 1 cm = 2 m. What is the actual area of the tennis court?

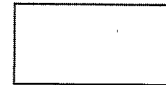


5. A portion of a map with cities A and B is shown. The map uses a scale of 1 inch = 30 miles. You are making a map with a scale of 2 inches = 15 miles. How far apart are cities A and B on your map?



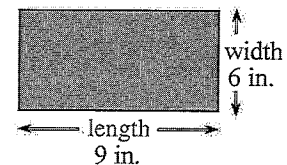
6. The blueprint for the Morenos' living room has a scale of 2 inches = 5 feet. The family wants to use a scale of 1 inch = 3 feet. What is the width of the living room on the new blueprint?

width = 6 inches



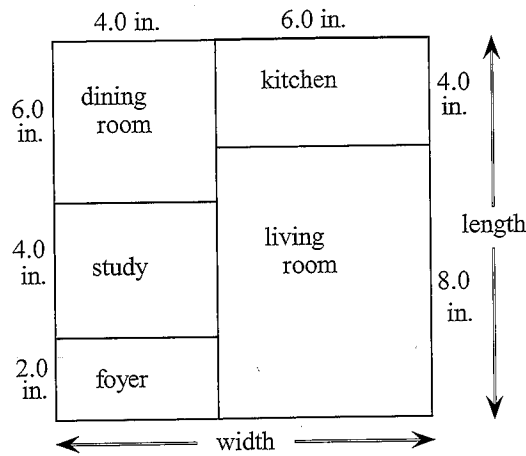
7. **Writing** The drawing on the right of a swimming pool has a scale of 1 inch = 3 meters.

- a) Find the dimensions of another drawing of this swimming pool with a scale of 2 inches = 5 meters.



- b) How many different scales are available to use for a scale drawing? Why could one scale be more useful than another?
8. **Reasoning** On a map, 1 inch equals 7.2 miles. Two houses are 1.5 inches apart on the map.
- a) What is the actual distance between the houses?
- b) Show how you can represent the scale with two different ratios. What ratio is more helpful for solving the problem? Explain.

9. **Error Analysis** On the floor plan, 1 in. represents 2 ft. Tony calculates the actual length of the kitchen to be 2 ft.



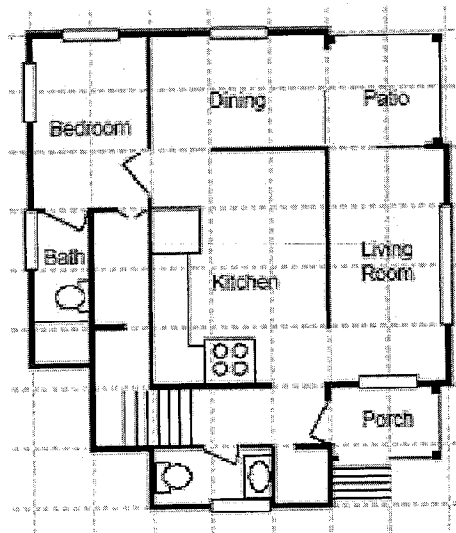
- a) What is the actual length of the kitchen?

- b) What error did Tony likely make?

- A. He multiplied 4.0 in. by the ratio  $\frac{1 \text{ in.}}{2 \text{ ft}}$  and did not consider the units.
- B. He multiplied 4.0 in. by the ratio  $\frac{2 \text{ ft}}{1 \text{ in.}}$ .
- C. He divided 4.0 in. by the ratio  $\frac{1 \text{ in.}}{2 \text{ ft}}$  and did not consider the units.

- c) Explain how you could have recognized that Tony's result was likely an error.

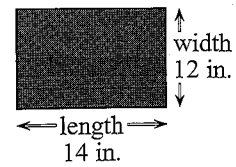
10. **Flooring** How many square feet of flooring is needed to cover the entire bedroom floor?



1 inch = 4 feet  
The gridlines are spaced 1 inch apart.

Windows

15. **Think About the Process** The blueprint of a concrete patio has a scale of 2 in. = 3 ft. You want to find the dimensions of a new blueprint of the patio with a scale of 4 in. = 5 ft.



- a) What is the first step in finding the dimensions of the new scale?
- A. Multiply each dimension on the scale drawing by  $\frac{2 \text{ in.}}{3 \text{ ft}}$  to find the actual dimension of the patio.
  - B. Multiply each dimension on the scale drawing by  $\frac{5 \text{ ft}}{4 \text{ in.}}$  to find the actual dimension of the patio.
  - C. Multiply each dimension on the scale drawing by  $\frac{3 \text{ ft}}{2 \text{ in.}}$  to find the actual dimension of the patio.
- b) The length of the blueprint with the new scale is \_\_\_\_\_ in.
- c) The width of the blueprint with the new scale is \_\_\_\_\_ in.