

## Practice 4-8

Problem Solving: Draw a Diagram

Frank is laying square tiles on a rectangular floor. He wants the perimeter tiles to be a different color for two rows around the edges of the room. The dimensions of the room are 20 feet by 10 feet. Each tile is 1 foot on a side.

1. Draw a diagram to show how Frank could tile the floor. Use two colors.
2. How many border tiles does he need?
3. How many inside tiles does he need?

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**Solve each problem by drawing a diagram.**

4. Jessica is hanging five posters on a 19-foot wall. Each poster is 2 feet wide, and she wants to have 1 foot of space between the posters and an equal amount of space at both ends. Draw a diagram to show the placement of the posters.
5. Suppose you are hanging posters along a 35-foot wall in the hallway. Each poster is 2 feet wide.
  - a. What is the greatest number of posters that you could fit along the wall without overlap?  
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  - b. What is the greatest number of posters that you could fit along the wall if you kept 2 feet between them? Draw a diagram to show your answer.

**Choose a strategy to solve each problem.**

6. Matthew earns \$.10 for each local newspaper he delivers twice a week. His brother earns \$.25 for delivering each Sunday newspaper. They deliver papers to the same number of houses and together they earn \$13.95 per week. How many papers does each boy deliver each week?  
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7. Megan's car averaged 336 miles on 12 gallons of gas. How many gallons of gas did Megan use to drive 1,344 miles on vacation?  
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