1. Use a “representative sets” approach to solve each problem below:
   (a) The ratio of boys to girls in a club is 1:3. If there are 24 children, how many boys are there?
   (b) The ratio of boys to girls in a club is 1:3. If there are 24 girls, how many boys are there?
   (c) The ratio of boys to girls in a club is 1:3. If there are 24 boys, how many children are there?
   (d) The ratio of red to black pieces in a game is 7:9, with 48 pieces total. How many are red?
   (e) The ratio of red to black pieces is 2:3. How many pieces are there altogether if there are 12 black ones?

2. Use and explain a scaling approach for solving these problems:
   (a) Allie bought half a dozen donuts for $1.80. How much would 9 donuts cost?
   (b) On a map, $1\frac{1}{2}$ inch corresponds to 12 miles. Two cities are shown as 6 inches apart on the map. How far apart are they in reality?
   (c) Jimmy paid $44 for 8 pizzas. How much will 20 pizzas cost?
   (d) It took Lorenz 2 hours to grade the first term papers for his 15 students. If 5 students drop the class, how long will it take him to grade the second term papers for that class?
   (e) Two thirds of a cup of sugar is needed to make 6 dozen dainty candies. How many dozen candies can be made using 4 cups of sugar?

3. Now use and explain a unit-rate approach for solving the same problems:
   (a) Allie bought half a dozen donuts for $1.80. How much would 9 donuts cost?
   (b) On a map, $1\frac{1}{2}$ inch corresponds to 12 miles. Two cities are shown as 6 inches apart on the map. How far apart are they in reality?
   (c) Jimmy paid $44 for 8 pizzas. How much will 20 pizzas cost?
   (d) It took Lorenz 2 hours to grade the first term papers for his 15 students. If 5 students drop the class, how long will it take him to grade the second term papers for that class?
   (e) Two thirds of a cup of sugar is needed to make 6 dozen dainty candies. How many dozen candies can be made using 4 cups of sugar?

4. (a) Use and explain a clearly label representative sets approach to solve: My recipe calls for $2\frac{1}{4}$ c. flour, $1\frac{1}{2}$ c. sugar, and $\frac{3}{8}$ tsp. vanilla to make 3 dozen cookies. How much of the other ingredients will I have to use if I plan to use $3\frac{1}{2}$ c. of sugar to make a large batch?
   (b) Use and explain a scaling approach to solve: My recipe calls for $2\frac{1}{4}$ c. flour, $1\frac{1}{2}$ c. sugar, and $\frac{3}{8}$ tsp. vanilla to make 3 dozen cookies. How much sugar will I need to go with 1 tsp. of vanilla?
   (c) Use and explain a unit-rate approach to solve: My recipe calls for $2\frac{1}{4}$ c. flour, $1\frac{1}{2}$ c. sugar, and $\frac{3}{8}$ tsp. vanilla to make 3 dozen cookies. How much flour will I need to make 5 dozen cookies?