Section 3.4   Focus Exercises

For each of these, set up the legend, set up a chart, establish the proportion and solve it. Be sure to write your answer as a complete sentence.

1.   A private school has a teacher to student ratio of 35 to 3. If the school has 420 students, how many teachers will they need?

2.   If 5 shares of a certain stock cost $135, how much will 14 shares cost?

3.   If a motorcycle can travel 108 miles on 3 gallon of gas, how much gas is needed to travel 480 miles?

4. Charlene received 18 votes for every 30 people who voted. If a total of 200 people voted, how many votes did Charlene receive?

5. Olivia is a nurse and works in the pediatric ward of St. Jude's Hospital. Several of her patients receive the same medication for pain. If a 28 pound child receives 70 cc's of the medicine, how much of the medicine should be given to a child weighing 42 pounds?

6. A roofing company sells roofing material for $12 per square yard.

   a) How much will 150 square yards of roofing material cost?

   b) How many square yards of roofing material can be purchased for $900?

7.   Diego is an architect. In his design drawing of an office building, $\frac{3}{4}$ of an inch on paper represents 12 feet of real building.

   a)   How many feet are represented by 4 inches on the drawing?

   b)   How many inches on the drawing represent 30 feet?

8. $2\frac{1}{4}$ pounds of Granny Smith apples cost $3.00.

   a)   How much will $5\frac{5}{8}$ pounds of Granny Smith apples cost?

   b)   How many pounds of apples can be purchased for

9. A red weight can stretch (pull down on) a hanging spring 4 inches. A green weight, which is 3 pounds heavier than the red, stretches the spring 6 inches. How heavy is each weight?

10. Andy rides his bike on a variety of courses each Saturday. His training requires that he rides a the same average speed no matter the course he is on. Andy usually completes the Tampa course in 40 minutes and the Orlando course—which is 3 miles longer than the Tampa course—in 50 minutes. How many miles is each course?

11. Jamie and Becca both had some chocolate chip cookies for dessert. The total calories in Jamie's cookies was 180; the total calories in Becca's cookies was 108. If Becca had 2 fewer cookies than Jamie, how many cookies did each one eat?