Extra Practice 8

Lesson 5.8: Solving Ratio Problems

1. Find the value of each variable.
   a) $x{:}8 = 9{:}24$ b) $y{:}15 = 7{:}3$
   c) $a{:}8 = 9{:}4$ d) $p{:}12 = 15{:}10$
   e) $b{:}5 = 18{:}6$ f) $t{:}11 = 6{:}33$
   g) $2{:}7 = 20{:}d$ h) $34{:}85 = f{:}5$
   i) $45{:}30 = 6{:}s$ j) $9{:}36 = c{:}8$

2. An advertisement claims that 7 out of 8 people prefer Brand X.
   Suppose 216 people were interviewed.
   Find the number of people who prefer Brand X.

3. The Grade 8 students held a graduation dance.
   Four out of 7 students attended.
   There are 112 Grade 8 students.
   How many students attended the dance?

4. A ski shop rents 5 snowboards for every 3 sets of skis it rents.
   Suppose 126 sets of skis were rented.
   How many snowboards were rented?

5. A blueprint for a cottage has a scale of 1:40.
   One room measures 3.4 m by 4.8 m.
   Calculate the dimensions of the room on the blueprint.

6. For a painting, the ratio of the length to the width is 5:3.
   The painting is 45 cm wide.
   How long is the painting?

7. The ratio of the number of students who take trumpet lessons to clarinet lessons is 6:5.
   The ratio of the number of students who take piano lessons to trumpet lessons is 8:3.
   Ten students take clarinet lessons.
   a) How many students take trumpet lessons?
   b) How many students take piano lessons?

8. The scale on a map is 1 cm represents 40 km.
   The actual straight line distance between 2 cities is about 340 km.
   What is the map distance between these 2 cities?