Proportion Problems

Solve each problem. You may make a Factor Puzzle to help you.

1. For every 3 trombones in the marching band, there are 4 trumpets and 6 snare drums. If there are 20 trumpets, how many trombones and snare drums are in the band?

2. The principal at Harbor School found that 7 out of 10 students do most of their research for writing reports on the Internet. If 150 students are writing reports, how many will do most of their research on the Internet?

3. Today the bakers at Tastee Bakery made 8 dozen hermits and \(6 \frac{1}{2}\) dozen oatmeal raisin cookies. The bakers always make the cookies in the same ratio. How many hermits will they need to bake tomorrow if they bake 104 oatmeal-raisin cookies?

4. Edgar says that for every 20 e-mails he receives, 3 are spam. He also says that he reads only 2 out of every 15 spams. If Edgar read 8 spams last month, what was the total number of e-mails he received?

5. Liane had her picture taken standing next to a flagpole. In the photo, the image of Liane is 3 cm tall and the flagpole is 15 cm tall. Liane is actually 48 inches tall. What is the actual height, in feet, of the flagpole?

6. Extend It Did you use a proportion to solve problem 2? What is another way to solve the problem?
Proportion Problems

Solve each problem. You may make a Factor Puzzle to help you.

1. For every 3 trombones in the marching band, there are 4 trumpets and 6 snare drums. If there are 20 trumpets, how many trombones and snare drums are in the band?

   15 trombones, 30 snare drums

2. The principal at Harbor School found that 7 out of 10 students do most of their research for writing reports on the Internet. If 150 students are writing reports, how many will do most of their research on the Internet?

   105 students

3. Today the bakers at Tastee Bakery made 8 dozen hermits and $6 \frac{1}{2}$ dozen oatmeal raisin cookies. The bakers always make the cookies in the same ratio. How many hermits will they need to bake tomorrow if they bake 104 oatmeal-raisin cookies?

   128 hermits

4. Edgar says that for every 20 e-mails he receives, 3 are spam. He also says that he reads only 2 out of every 15 spams. If Edgar read 8 spams last month, what was the total number of e-mails he received?

   400 e-mails

5. Liane had her picture taken standing next to a flagpole. In the photo, the image of Liane is 3 cm tall and the flagpole is 15 cm tall. Liane is actually 48 inches tall. What is the actual height, in feet, of the flagpole?

   20 feet

6. Extend It Did you use a proportion to solve problem 2? What is another way to solve the problem?

   Sample answer: I could solve the problem by writing the ratio as the fraction $\frac{7}{10}$ and then finding $\frac{7}{10}$ of 150.