Ratio Problems and Bar/Block Models 2

**Example.**
Jack and Simon divided a reward in a ratio of 3:5. Simon got $80 more than Jack.
How much was the total reward? How much did each boy get?

In this problem, we know the *difference* between how much
Jack and Simon got. We draw Jack's and Simon's parts side
by side. Jack gets 3 "blocks" and Simon gets 5 "blocks."

The *difference* is now easily seen from the model. Simon's part
was 2 blocks more than Jack's, and those 2 blocks equal $80.
Therefore, <u>1 block equals $40</u>.

So, the total reward was 8 × $40 = 320, Jack got 3 × $40 = $120, and Simon got 5 × $40 = $200.
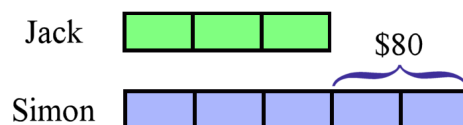
1. A crate of cell phones has red and silver models in a ratio of 2:7.
   There are 300 more silver phones than red ones.

   a. Draw a block model to represent the situation.

   b. How many phones are in the crate?

   c. How many are red?

2. Eric and Erica collect phone cards, and their phone
   cards are in a ratio of 3:4. If Erica has 14 more phone
   cards than Eric, how many cards does Eric have?

3. The life spans of Mr. Short and Mr. Long were
   in a ratio of 3:7. Mr. Long lived 44 years longer
   than Mr. Short. How long did Mr. Long live?

4. Mark and Mary shared a sum of money in a ratio of 2:5.
   Then Mary gave 1/5 of her money to Mark.
   Now Mary has $30 more than Mark.
   What was the total sum of money?

Sample worksheet from
www.mathmammoth.com
84   Math Mammoth Ratios, Proportions & Problem Solving (Blue Series)