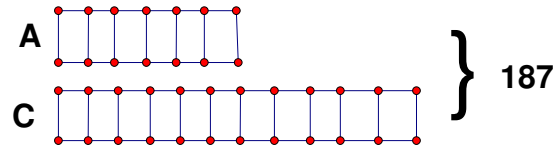
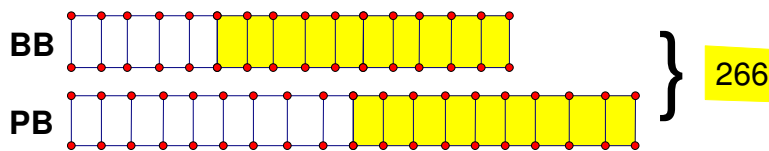


1. The strategy for ratios is to draw boxes. There are 187 people at the playground, so we will find out how much each box represents by finding there are  $6 + 11$  boxes total, and  $187 \div 17 = 11$ , so each box represents 11 people.



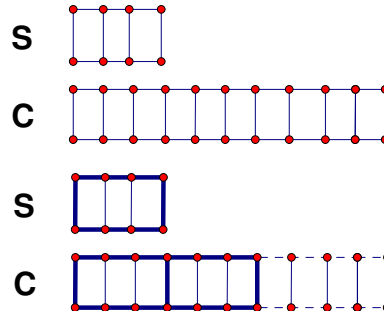
So we find that there are  $6 \times 11 = 66$  adults there. Now draw boxes for men and women, with has a 5:6 ratio. We need to find out what each box represents, so we see there are  $5 + 6 = 11$  boxes, and each box represents  $66 \div 11 = 6$  people. So there are  $5 \times 6 = 30$  men and  $6 \times 6 = 36$  women, so there are  $\boxed{6}$  more men than women.

2.  $\boxed{36}$
3.  $\boxed{\$75}$
4.  $\boxed{35}$
5. Let's draw boxes. We draw 5 for black beans and 9 for pinto beans. Then after the shipment, the number of black beans is tripled and the number of pinto beans is doubled. So we will triple and double the boxes in our diagram, so now we have 15 for black beans and 18 for pinto.



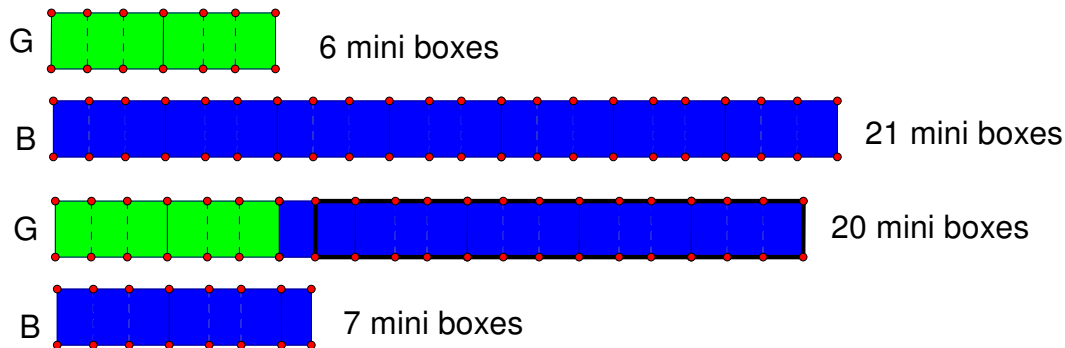
So we added 266 cans and 19 boxes, shown in yellow. Therefore each box represents  $266 \div 19 = 14$  cans of beans. So we had 14 boxes at first, and each box represents 14 cans, so we originally had  $14 \times 14 = \boxed{196}$  cans

6. Draw on your paper 3 boxes and 10 boxes. Now let's consider the ratio of money after she spends money. The amount in her savings does not change, only the amount in her checking. So we can draw a new set of boxes with ratio 1:2 based off the old set that represent her money after spending.



By looking at our diagram, we see that the money she spend represents four boxes. She spent \$28 on each of the four text books, so each box represents \$28. So she had 9 small boxes left in her accounts after she spent her money, so she had  $28 \times 9 = \boxed{\$252}$

7. Draw the problem using boxes. First we have boxes in the ratio 2:7. Then he moves  $\frac{2}{3}$  of the boxes from the blue bar to the green bar. We cut each of the 7 boxes in the blue bar into thirds, making 21 mini-boxes. Now we move  $\frac{2}{3}$  of them, or 14 of the mini-boxes, to the green bar.



Now, the Green bar has 20 mini boxes, and the Blue bar has 7. We know that the problem says the blue box has 26 less books than the green box. The difference in mini-boxes is  $20 - 7 = 13$ . So each mini-box represents  $26 \div 13 = 2$  books. There are 27 mini-boxes altogether, so Ankur has  $27 \times 2 = \boxed{54}$  books.

8. Consider the end ratio. She had 4:3 red to orange marbles, so if we drew a box diagram, we would have 4 boxes to 3. She had 140 red marbles in the end, so each box represents  $140 \div 4 = 35$  marbles. So at the end she had 140 reds,  $35 \times 3 = 105$  oranges, so 245 total. The bad came with 141 marbles, so she had  $245 - 141 = 104$  marbles initially. We know the ratio of her initial marbles is 3:5, so we can find out that she initially had 39 reds and 65 oranges. If she had 65 oranges originally and ended up with 105 oranges, then  $105 - 65 = \boxed{40}$  came in the bag.
9. If we drew the box diagram of Mitchell's and Connor's ages, we would have 8 boxes to 5 boxes (call them Type 1 boxes, since they are from the first ratio we are given). Each Type 1 box represents  $x$  years. If we drew the box diagram of the second ratio, we would have 6 boxes and 5 boxes of Type 2 boxes, where each box represents  $y$  years.

