In the Drawer

Goals

- Revise drawings or make new ones to match mathematical relationships given in words.
- Generate equivalent ratios.

Notes

To help students figure out the number of items to remove in order to achieve the desired ratio, provide them with different color chips to represent the different items. They can then use the chips to model and solve the problems.

Solutions to all problems in this set appear on page 31.

In the Drawer 1

Questions to Ask

- How many white socks are in the drawer? (nine)
- How many blue? (seven)
- How many white socks would you have to take out of the drawer so the number of white socks left would be the same as the number of blue socks? (two)
- How many socks would you have to take out so there would be more blue than white socks left? (three white)
- Are other answers possible? (Yes, to leave more blue than white socks you must remove at least three white socks, leaving seven blue and six white socks. Other correct answers would be, leave seven blue socks and remove four, five, up to nine white socks. The number of blue socks may vary as long as there are more of them than white socks.)

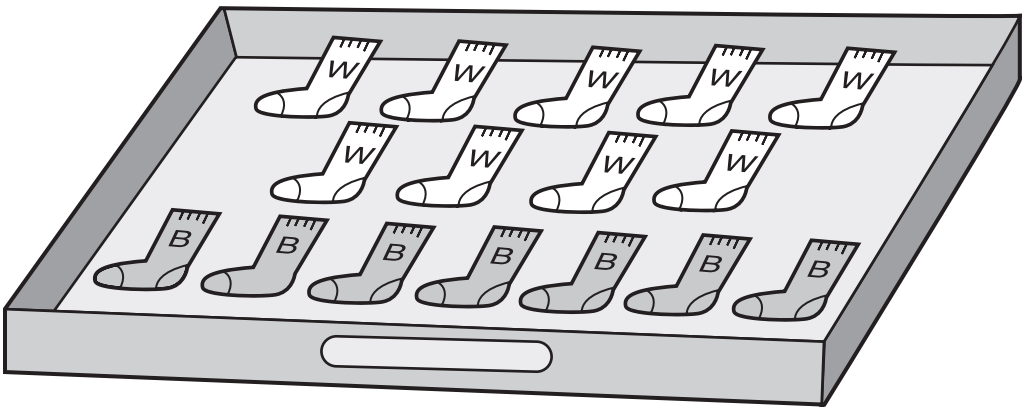
Solutions

1. one white sock and three blue socks

2. Possible answer: The number of white socks is an even number since it is twice the number of blue socks. Remove one white sock, leaving eight white socks. Eight is twice four, so the number of blue socks must be four. To leave four blue socks, remove three blue socks.

In the Drawer 1

There are blue (B) and white (W) socks in the drawer.



Take out the fewest socks possible so that there are twice as many white socks as blue socks left in the drawer.

1. What socks do you need to take out of the drawer? _____

2. Tell how you figured it out. _____