Ratios in the Garden

You can use ratios to describe a garden with different types of plants. Look at the plan of the garden at the right. The garden contains flowers, lettuce, and tomatoes.

1. What is the ratio of the area of the lettuce to the area of the entire garden?

2. What is the ratio of the area of the flowers to the area of the lettuce?

3. Suppose the area planted with tomatoes was doubled. What would be the ratio of the area with tomatoes to the area of the entire garden? Explain how you found your answer.

4. Now plan a new garden. You want the ratio of lettuce to flowers to tomatoes to be 5 : 4 : 3. Use the grid at the right to draw the plan of your garden.

5. Explore It Is there only one possible way to draw the garden plan in exercise 4? Explain how you know.
Ratios in the Garden

You can use ratios to describe a garden with different types of plants. Look at the plan of the garden at the right. The garden contains flowers, lettuce, and tomatoes.

1. What is the ratio of the area of the lettuce to the area of the entire garden?

   

   \[ \frac{1}{2} \]

   1 : 2

2. What is the ratio of the area of the flowers to the area of the lettuce?

   

   \[ \frac{1}{3} \]

   1 : 3

3. Suppose the area planted with tomatoes was doubled. What would be the ratio of the area with tomatoes to the area of the entire garden? Explain how you found your answer.

   \[ 2 : 3; \text{ Sample answer: Since the area of the tomatoes would double, the ratio would be 80 : 120 or 2 : 3.} \]

4. Now plan a new garden. You want the ratio of lettuce to flowers to tomatoes to be 5 : 4 : 3. Use the grid at the right to draw the plan of your garden.

   Possible answer shown.

5. Explore It Is there only one possible way to draw the garden plan in exercise 4? Explain how you know.

   No. Sample answer: The garden can be divided any way as long as there is 50 sq ft of lettuce, 40 sq ft of flowers, and 30 sq ft of tomatoes.