Section 7.2 Focus Exercises

Follow the guidelines outlined in Section 7.2 to solve each application situation. **SHOW ALL WORK, INCLUDING THE LEGEND AND A DIAGRAM.**

SHOW ALL WORK ON YOUR OWN PAPER.

1. An artist has created a book of prints of her abstract work. The book, itself, is a work of art in that each rectangular page is a different size; the artist requires that the dimensions of each page be so that the width is always 2 inches less than the length. One page has an area of 48 square inches. Find the dimensions of that page.

2. A rectangular picture window has an area of 21 square feet. The length is one foot less than twice the width. Find the dimensions of the picture window.

3. A rectangular roof has an area of 60 square yards. The width is 1 yard less than half of the length. Find the dimensions of the roof.

4. A stained glass window is in the shape of a right triangle. The whole window has an area of 30 square feet. The smaller leg is 4 feet less than the longer leg. What are the lengths of the two legs of the triangle?

5. A public vegetable garden is divided up in different shapes for those who wish to grow vegetables there. Mitch's piece is in the shape of a right triangle and has an area of 40 square feet. The longer leg is 6 feet less than twice the shorter leg. What are the lengths of the two legs of that triangle?

6. A right triangle's longer leg is 2 inches more than twice the shorter leg, and the hypotenuse is 1 inch more than the longer leg. Find the dimensions of the right triangle.

7. A right triangle's hypotenuse is 4 feet more than three times the shorter leg, and the longer leg is 1 foot less than the hypotenuse. Find the dimensions of the right triangle.