

EXTRA PRACTICE — Exercises

Copyright © 2003 by Videotext *Interactive*

Unit V – First Degree Relations with Two Placeholders

Part D – Problem Solving Using Two Placeholders

Lesson 3 – “Geometric Figure” Problems

For each of the following story problems, answer the four analysis questions to find the system of equations needed to solve. Then solve and use common sense to check your answers.

1. The height of a triangle is 8 times the length of the base. If the area of the triangle is 36 square feet, find the height of the triangle and the length of the base.

2. A rectangular patio floor has a length that is 1 yard less than twice its width. The floor is extended by adding an additional 3 yards to the original patio's length and an additional 2 yards to its width. Find the area of the original floor given that the total area of the patio floor is 40 square yards after the extension is built.

3. A rectangle's length is four times its width. A triangle's height is 4 times the length of its base. The triangle's height is the same as the rectangle's length. Find the area of each figure given that the sum of the areas is 150 square feet.

4. A square and a rectangle have the same width. The rectangle's length is 4 times its width. Find the area of each figure given that the sum of the two areas is 80 square feet.

5. One square is 3 times as wide as another. Find the area of each square given that the difference between the two areas is 200 square centimeters.

