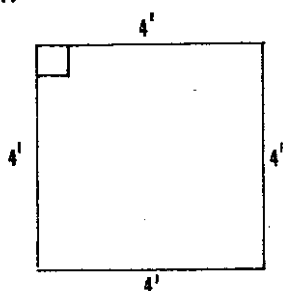


Chapter 9: Homework #2

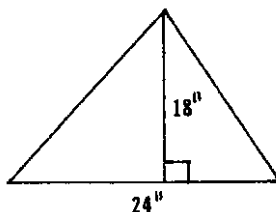
Introduction to Area Problems

I. Find the area of the following figures:

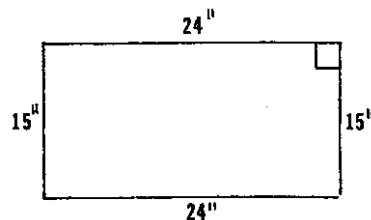
1.



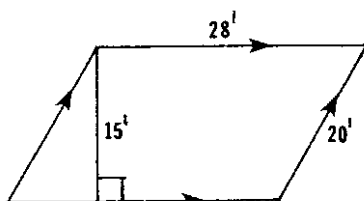
2.



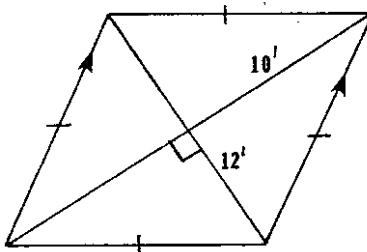
3.



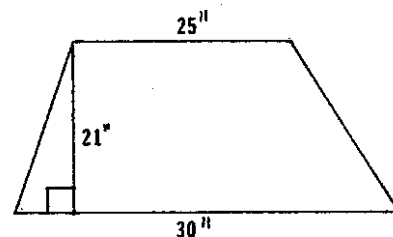
4.



5.



6.



II. Solve the following problems: 1) diagram, 2) label diagram, 3) set up problem, 4) solve

1. The sides of a ^{right} triangle are 6', 8', and 10'. Find the area. _____
2. The area of a trapezoid is 360 sq ". The altitude is 12" and one base is 36". Find the other base. _____
3. Find the area of a parallelogram if a 45° angle is included between sides of 22' and 36'. _____
4. The diagonal of a rectangle is 40 m and the length is 24 m. Find the area. _____
5. The area of a rhombus is 54 sq ' and one diagonal is 12'. Find the other diagonal. _____
6. Find the area of a right isosceles triangle whose hypotenuse is 30 cm. _____
7. Find the area of a 30° - 60° - 90° triangle if its longest leg is 24 m. _____

Additional Area Problems

For each question...1) draw a diagram, 2) label the diagram, 3) set up the problem, 4) solve the problem.

1. The area of a square is 225 sq ". Find its diagonal. _____
2. The area of a triangle is 30 sq " and its base is 12". Find the height. _____
- SKIP #3 ~~3. Find the area of a regular hexagon whose perimeter is 72".~~ _____
4. Find the perimeter of a square equal in area to a rhombus whose diagonals are 16" and 18". _____
5. The area of a trapezoid is 288 sq ". Its altitude is 16". Find its bases if the larger base is twice the smaller base. _____
6. One angle of a rhombus is 120° . The perimeter is 96 m. Find the area.

7. In a parallelogram, the ratio of a side to its altitude is 2 : 1. If the area is 800 sq ', find the altitude. _____
8. The legs of an isosceles trapezoid are 10" and the altitude is 8". If the area is 96 sq ", find the bases. _____
9. The area of a parallelogram is 72 sq cm. The sides are 18 cm and 24 cm. Find the longer altitude. _____
10. Find the area of an equilateral triangle whose perimeter is 36'. _____
11. The area of a rhombus is 108 sq " and one diagonal is 24". Find the perimeter.

12. Find the area of a rhombus that contains a 60° angle and whose longer diagonal is 24'. _____
13. The area of a rectangle is 320 sq '. Its dimensions are in the ratio 5 : 1. Find the perimeter of the rectangle. _____
14. The area of a rhombus is 150 sq yd and one diagonal is $\frac{3}{4}$ the other. Find the perimeter. _____
15. The side of a parallelogram is 24" and the altitude drawn to that side is 8". Find the altitude drawn to the adjacent side if the length of that side is 20".
