

Word Problems - Special Right Triangles Name \_\_\_\_\_ Bell \_\_\_\_\_

Area Formulas -

Area of a Triangle =  $(1/2)(\text{base})(\text{height})$  Area of a Square =  $(\text{side})^2$

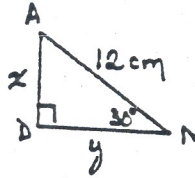
Draw a picture for each one - use a ruler. LABEL WELL !!! Show all work. Except for #4, all answers must be simplified radicals, denominators rationalized (no decimals).

1. An isosceles right triangle CAT has legs of length  $10\sqrt{2}$ . (angle T is the vertex angle)
  - a. Find the length of the hypotenuse. \_\_\_\_\_
  - b. Find the area of triangle CAT. \_\_\_\_\_

2. An equilateral triangle DOG has sides of length 12 inches.
  - a. What is the length of the altitude of triangle DOG? \_\_\_\_\_
  - b. Find the perimeter of triangle DOG. \_\_\_\_\_
  - c. Find the area of triangle DOG. \_\_\_\_\_

3. A diagonal of a square is 6 inches long.
  - a. Find the length of each side of the square. \_\_\_\_\_
  - b. Find the area of the square. \_\_\_\_\_

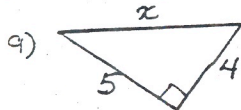
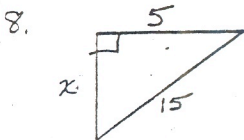
4. Choose the correct perimeter of triangle DAN to the nearest tenth.  
(use calculator)
  - a. 28.4 cm
  - b. 30 cm
  - c. 31.2 cm
  - d. 41.6 cm



5. The perimeter of a square is  $12\sqrt{2}$  inches.
  - a. Find the length of its diagonal. \_\_\_\_\_
  - b. Find the area of the square. \_\_\_\_\_

6. The perimeter of a square is 36 in.  
Find the length of its diagonal. \_\_\_\_\_

7. The perimeter of equilateral triangle MAN is 24 ft.
  - a. Find the length of its altitude. \_\_\_\_\_
  - b. Find the area of triangle MAN. \_\_\_\_\_



- 10) Classify this  $\Delta$  as acute, obtuse or right:  
4, 10, 8