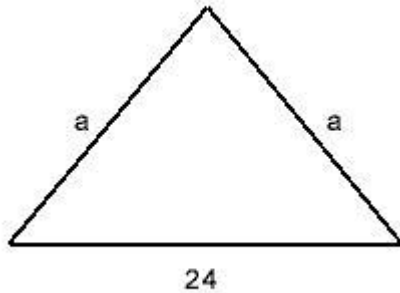


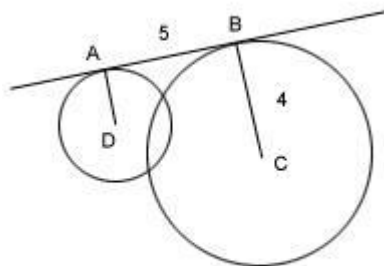
第十一套

1. The area of a rectangle with sides x and $3x$, is how many times greater than the area of a right angled isosceles triangle with side x ?
2. If \$81 is to be divided among n people, where $n > 1$, so that each gets $\$x$, where x is a whole number > 1 , how many different values could there be for n ?



(figure not to scale)

3. If the area of the triangle shown above is 108 square centimeters, what is its perimeter in centimeters?
4. A charity organisation sells greetings cards in packs costing \$10 or \$2.50 each. A total of 75 packs were sold at a fair for a total of \$375. How many of the \$2.50 packs were sold?
5. The length of a rectangle is $\frac{2}{7}$ of the perimeter. What is the value of the diagonal of the rectangle if the perimeter is 14 units?
6. $A = \{A, B, C, D, E, F, G\}$
 $B = \{0, 1, 2\}$
 $C = \{1, 2, 3, 4, 5, 6, 7, 8, 9\}$
 The filing system in an office requires each file to have an alphanumeric code name of the form abc . A , B and C are the sets from which a, b , and c must be chosen. How many possible code names are there?
7. A measuring cylinder is filled one third full with ethanol. A mixture of ethanol, water and propanol is used to fill the measuring flask to capacity. What fraction of the final mixture is ethanol?
8. The equation $y = 6$ is graphed on the same coordinate axes as the circle with center $(4,4)$ and radius 3. One of the points of intersection of the line and the circle has x -coordinate 1.76. What is the x coordinate of the other point of intersection?
9. If a and b are positive integers, and $(ab^{3/2})^2 = 108$, what is the value of ab ?



10. The line through AB is tangent to two circles with centers D and C and whose areas are in the ratio 4: 1