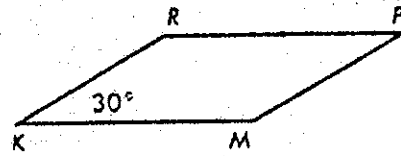
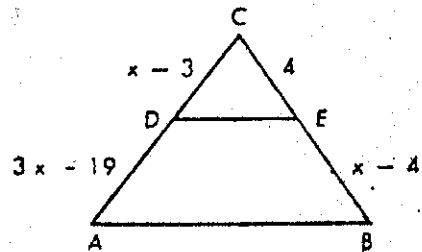


Geometry Team #1

Quadrilateral $KMPR$ is a parallelogram. Given that $m\angle K = 30^\circ$, $KM = 11$, and $KR = 8$, Find the exact area of $KMPR$.



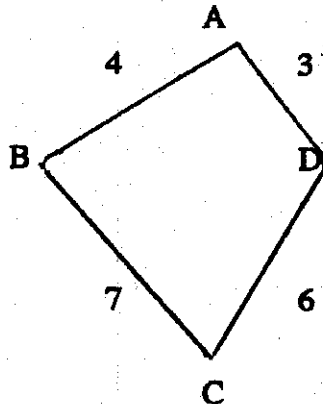
Geometry Team #2



Given the figure as marked. Find all values of x which will make $\overline{DE} \parallel \overline{AB}$

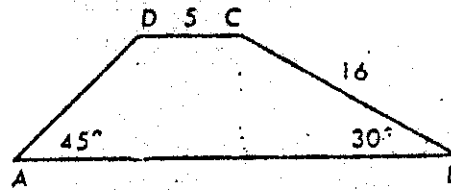
Geometry Team #3

Find the exact area of the quadrilateral. $\overline{BA} \perp \overline{DA}$.



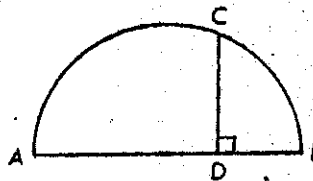
Geometry Team #4

In trapezoid ABCD, the measures of the base angles are 45° and 30° as shown.,
 $BC = 16$. $DC = 5$. Find the exact area of ABCD.



Geometry Team #5

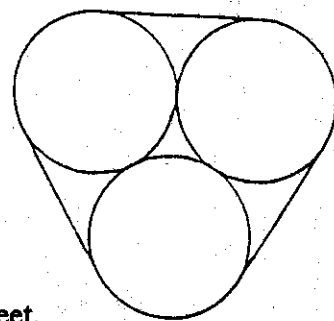
Given that $AB = 25$ and $AD = 5$, find CD.



Geometry Team #6

$A(-3,2)$ and $B(5,12)$ are two of the vertices of $\triangle ABC$. A line through G, the midpoint of \overline{AB} , and parallel to \overline{AC} , intersects \overline{BC} at $H(10, 2)$. Find the coordinates of C, the third vertex.

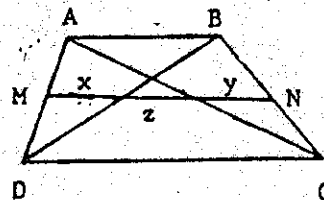
Geometry Team #7



The above diagram represents three circular garbage cans, each of diameter 2 feet. The three cans are all touching as shown. Find, in feet, the exact perimeter of the rope encompassing the three cans.

Geometry Team #8

Given trapezoid $ABCD$. $\overline{AB} \parallel \overline{CD}$. \overline{MN} is the median. $AB = 13$, and $CD = 29$. Find z .

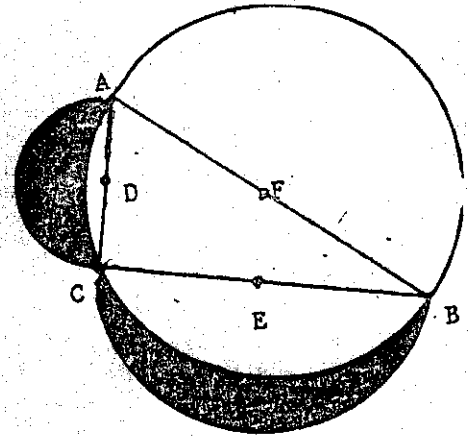


Geometry Team #9

The ratio of the areas of two similar hexagons is $4 : 3$. The sides of the larger hexagon are in a ratio of $6 : 5 : 5 : 4 : 4 : 3$. What is the length of the longest side of the smaller hexagon, if the perimeter of the larger hexagon is 54?

Geometry Team #10.

Find the exact area of the shaded region. Triangle ABC is inscribed in circle F. \overline{AB} is the diameter of circle F. D, E, and F are midpoints of the sides of $\triangle ABC$ and are centers of the semicircles. $AC = 6$ and $AB = 12$.

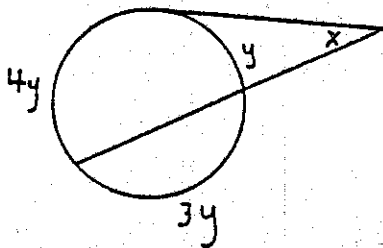


Geometry Team #11

The radius of a circle is perpendicular to an 8 inch chord 1 inch from the outer endpoint of the radius. What is the circumference of the circle?

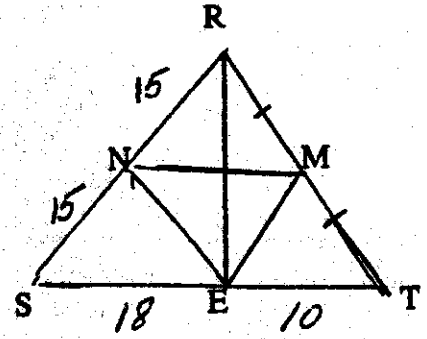
Geometry Team #12

Solve for x .



Geometry Team #13

\overline{RE} is an altitude of $\triangle RST$. Find MN , NE , ME .



Geometry Team #14

A circle of radius 6 has half of its area removed by cutting away a border of uniform width around the circle. Find the width of the border.

Geometry Team #15

Circle O has a radius of 4 and circle P has a radius of 6. If the length of \overline{DP} is 15, what is the length of \overline{AB} ?

