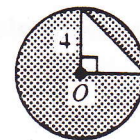


Areas of Plane Figures

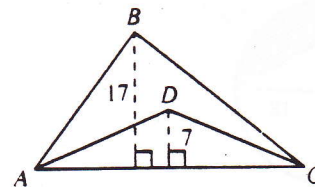
For use after Chapter 11

Find the area of each figure described.

1. A rectangle with length 15 and width 12 _____
2. A parallelogram with base 18 and height 9 _____
3. A triangle with base 13 and height 8 _____
4. A rhombus with shorter diagonal 6 cm and a 120° angle _____
5. A square whose perimeter is 60 _____
6. A regular hexagon with side 12 _____
7. A regular pentagon with side s and apothem 3 _____
8. A rhombus with diagonals 6 and 14 _____
9. An isosceles trapezoid with legs 13 and bases 12 and 22 _____
10. Find the circumference and area of a circle with radius 10.
Use $\pi \approx 3.14$.
 $C \approx$ _____, $A \approx$ _____
11. The area of a circle is 144π . Find the circumference. _____
12. Find the area of the shaded region of $\odot O$. _____
13. In circle P with diameter 10, $m\angle APB = 60$. Find the length of \widehat{AB} and the area of sector APB .
length of $\widehat{AB} =$ _____, $A =$ _____
14. The ratio of the areas of two rectangles is 36 : 64. Find the scale factor and the ratio of the perimeters.
scale factor = _____, ratio of the perimeters = _____
15. Two similar polygons have scale factor 3 : 4. The area of the smaller polygon is 108. Find the area of the larger polygon.



Ex. 12

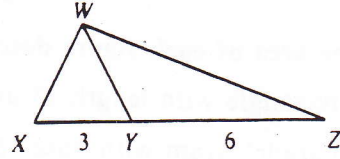


16. The ratio of the areas of $\triangle ABC$ and $\triangle ADC$ is _____.
17. The areas of two circles are 144π and 64π . The ratio of their circumferences is _____.
18. The ratio of the perimeters of two similar triangles is 3 : 5. The scale factor is _____ and the ratio of their areas is _____.

19. Two similar polygons have scale factor 3 : 5. The area of the larger polygon is 125.

The area of the smaller polygon is _____.

20. The ratio of the areas of $\triangle WXY$ and $\triangle WYZ$ is _____.



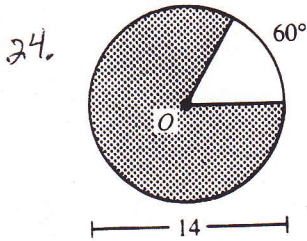
21. In circle O with radius 12, $m\angle GOH = 30$. Find the length of \widehat{GH} and the area of sector GOH .

length of $\widehat{GH} =$ _____, $A =$ _____

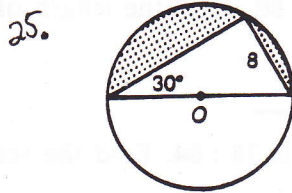
22. The area of sector AOB is 20π and $m\angle AOB = 100$. Find the radius of circle O . _____

23. The length of \widehat{CD} is 4.2π and $m\angle COD = 70$. Find the radius of circle O . _____

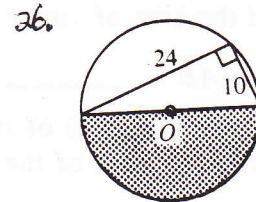
Find the area of each shaded region. Point O marks the center of a circle.



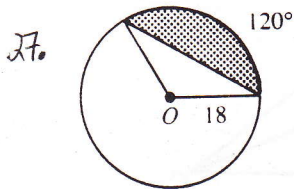
$A =$ _____



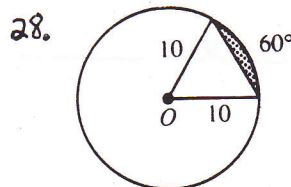
area = _____



$A =$ _____

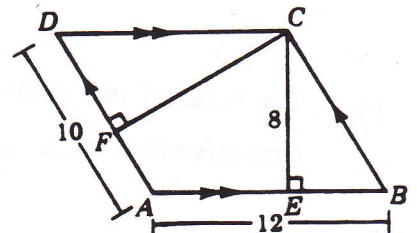


$A =$ _____



$A =$ _____

29) find CF .



$CF =$ _____