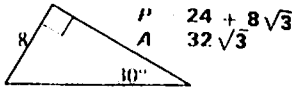
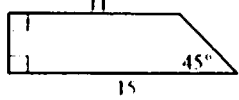


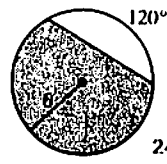
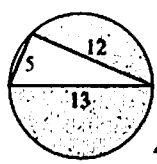
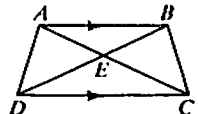
## Chapter Review

- The perimeter of a square is 32. Find the area. 64 9-1
- Find the area of a rectangle with length 4 and diagonal  $6\sqrt{5}$ .
- Find the area of a square with side  $3\sqrt{2}$  cm.  $18\text{ cm}^2$
- Find the area of a rhombus with side 17 and longer diagonal 30. 240 9-2
- A parallelogram has sides 8 and 12. The shorter altitude is 6. Find the length of the other altitude. 9
- Find the perimeter and the area of the triangle shown.   $P = 32 + \sqrt{3}$ ;  $A = 24 + 8\sqrt{3}$
- Find the height of a trapezoid with median 12 and area 84. 7 9-3
- Find the area of an isosceles trapezoid with legs 5 and bases 4 and 12. 24
- Find the perimeter and the area of the figure shown.   $P = 30 + 4\sqrt{2}$ ;  $A = 52$

Find the area of each regular polygon.

- A square with apothem 3 m.  $36\text{ m}^2$  9-4
- An equilateral triangle with radius  $2\sqrt{3}$ .  $9\sqrt{3}$
- A regular hexagon with perimeter 12 cm.  $6\sqrt{3}\text{ cm}^2$  13.  $C = 188.4$ ;  $A = 2826$  9-5
- Find the circumference and area of a circle with radius 30. Use  $\pi \approx 3.14$ .
- The area of a circle is  $121\pi\text{ cm}^2$ . Find the diameter. 22 cm
- A square with side 8 is inscribed in a circle. Find the circumference of the circle.  $8\pi\sqrt{2}$
- Find the length of a  $135^\circ$  arc in a circle with radius 24.  $18\pi$  9-6

Find the area of each shaded region.

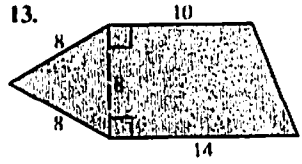
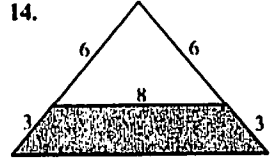
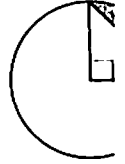
-   $24\pi + 9\sqrt{3}$
-   $42.25\pi - 30$
- If  $AB = 9$  and  $CD = 12$ , find the ratio of the areas of:  9-7
  - $\triangle AEB$  and  $\triangle DEC$  9:16
  - $\triangle AED$  and  $\triangle DEC$  3:4
- Two regular octagons have perimeters 16 cm and 32 cm, respectively. What is the ratio of their areas? 1:4
- Two similar polygons have the scale factor 7:5. The area of the large polygon is 147. Find the area of the smaller polygon. 75

## Chapter Test

Find the area of each figure described.

- A circle with diameter 10.  $25\pi$
- A square with diagonal 4 cm.  $8\text{ cm}^2$
- An isosceles right triangle with hypotenuse  $6\sqrt{2}$ . 18
- A circle with circumference  $30\pi$  m.  $225\pi\text{ m}^2$
- A rhombus with diagonals 5 and 4. 10
- An isosceles trapezoid with legs 10 and bases 6 and 22.  $84$
- A parallelogram with sides 6 and 10 that form a  $30^\circ$  angle. 30
- A regular hexagon with apothem  $2\sqrt{3}$  cm.  $24\sqrt{3}\text{ cm}^2$
- Sector  $AOB$  of  $\odot O$  with radius 4 and  $m\widehat{AB} = 45$ .  $2\pi$
- A rectangle with length 12 inscribed in a circle with radius 7.5.  $108$
- A sector of a circle with radius 12 and arc length  $10\pi$ .  $60\pi$
- A square with radius 9. 162

Find the area of each shaded region.

-   $A = 16\sqrt{3} + 96$
-   $A = 10\sqrt{3}$
-   $A = 16\pi$
- The areas of two circles are  $100\pi$  and  $36\pi$ . Find the ratio of their radii and the ratio of their circumferences. 5:3; 5:3
- Two regular pentagons have sides of 14 m and 3.5 m, respectively. Find their scale factor and the ratio of their areas. 4:1; 16:1

- In  $\odot Q$ ,  $m\widehat{ABC} = 288$  and  $QA = 10$ . Find the length of  $\widehat{AC}$ .  $4\pi$

