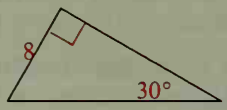
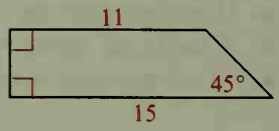
Chapter Review

1. Find the area of a square with perimeter 32. **11–1**
2. Find the area of a rectangle with length 4 and diagonal 6.
3. Find the area of a square with side $3\sqrt{2}$ cm.
4. Find the area of a rhombus with side 17 and longer diagonal 30. **11–2**
5. A parallelogram has sides 8 and 12. The shorter altitude is 6. Find the length of the other altitude.
6. Find the perimeter and the area of the triangle shown.



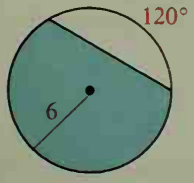
7. Find the height of a trapezoid with median 12 and area 84. **11–3**
8. Find the area of an isosceles trapezoid with legs 5 and bases 4 and 12.
9. Find the perimeter and the area of the figure shown.



10. Find the area of a square with apothem 3 m. **11–4**
11. Find the area of an equilateral triangle with radius $2\sqrt{3}$.
12. Find the area of a regular hexagon with perimeter 12 cm.
13. Find the circumference and area of a circle with radius 30. Use $\pi \approx 3.14$. **11–5**
14. The area of a circle is 121π cm^2. Find the diameter.
15. A square with side 8 is inscribed in a circle. Find the circumference and the area of the circle.
16. Find the length of a 135° arc in a circle with radius 24. **11–6**

Find the area of each shaded region.

17.



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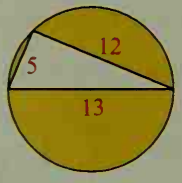

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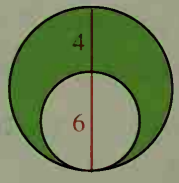
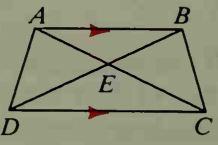


20. If $AB = 9$ and $CD = 12$, find the ratio of the areas of: **11–7**
    a. $\triangle AEB$ and $\triangle DEC$ **b.** $\triangle AED$ and $\triangle DEC$



21. Two regular octagons have perimeters 16 cm and 32 cm, respectively. What is the ratio of their areas?
22. Two similar polygons have the scale factor 7:5. The area of the large polygon is 147. Find the area of the smaller polygon.
23. A point is randomly chosen inside the larger circle of Exercise 19. What is the probability that the point is inside the smaller circle? **11–8**