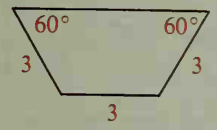
13.



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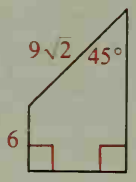

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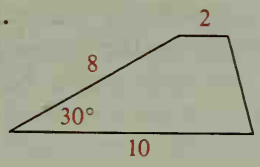


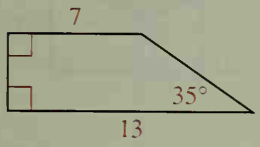
16. An isosceles trapezoid with legs 13 and bases 10 and 20

17. An isosceles trapezoid with legs 10 and bases 10 and 22

18. A trapezoid with bases 8 and 18 and 45° base angles

Use a calculator or the trigonometry table on page 311 to find the area of each trapezoid to the nearest tenth.

B **19.**



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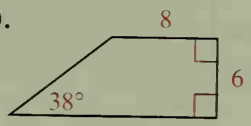

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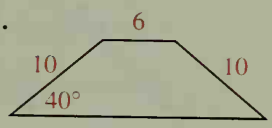


22. The legs of an isosceles trapezoid are 10 cm. The bases are 9 cm and 21 cm. Find the area of the trapezoid and the lengths of the diagonals.

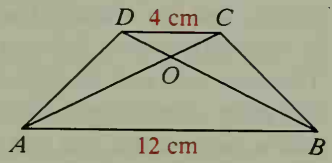
23. An isosceles trapezoid has bases 12 and 28. The area is 300. Find the height and the perimeter.

24. *ABCD* is a trapezoid with bases 4 cm and 12 cm, as shown. Find the ratio of the areas of:

a. $\triangle ABD$ and $\triangle ABC$

b. $\triangle AOD$ and $\triangle BOC$

c. $\triangle ABD$ and $\triangle ADC$



25. *ABCDEF* is a regular hexagon with side 12. Find the areas of the three regions formed when diagonals $\overline{AC}$ and $\overline{AD}$ are drawn.

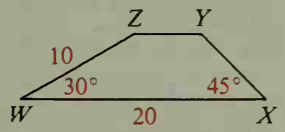
26. An isosceles trapezoid with bases 12 and 16 is inscribed in a circle of radius 10. The center of the circle lies in the interior of the trapezoid. Find the area of the trapezoid.

27. A trapezoid of area 100 cm^2 has bases of 5 cm and 15 cm. Find the areas of the two triangles formed by extending the legs until they intersect.

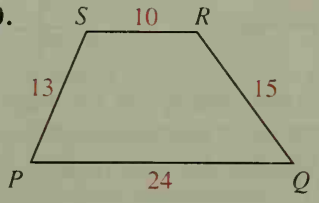
C **28.** Draw a non-isosceles trapezoid. Then construct an isosceles trapezoid with equal area.

Find the exact area of each trapezoid. In Exercise 31, $\odot O$ is inscribed in quadrilateral *ABCD*.

29.



30.



31.