

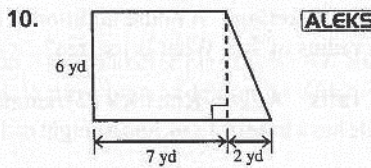
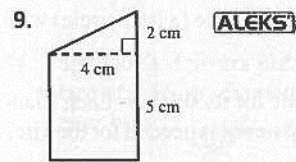
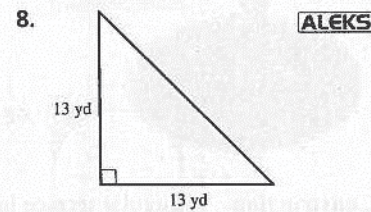
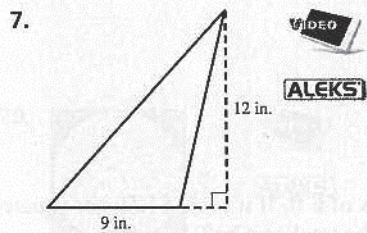
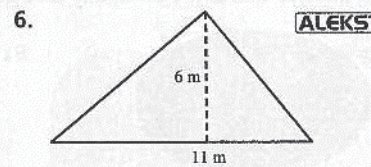
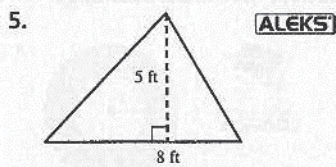
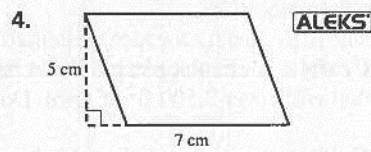
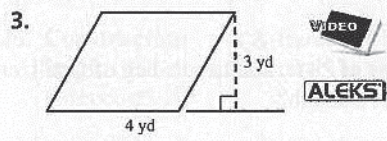
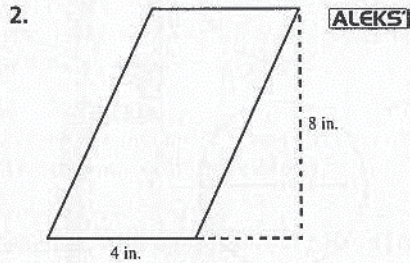
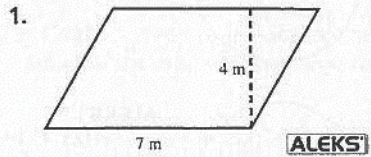
8.3 Exercises

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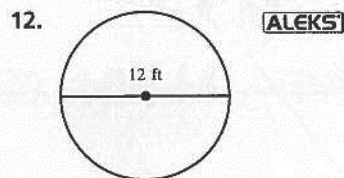
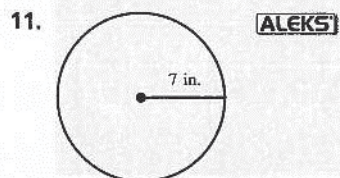
ALEKS

- Practice Problems
- Self-Tests
- NetTutor
- e-Professors
- Videos

Find the area of each figure.



Find the area of each figure. Use 3.14 for π and round your answer to one decimal place.



Name _____

Section _____ Date _____

ANSWERS

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

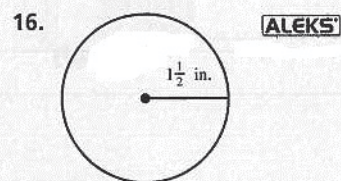
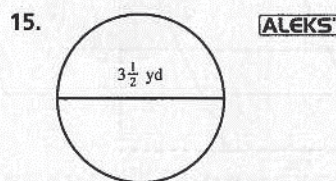
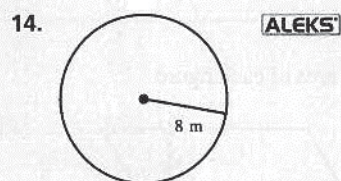
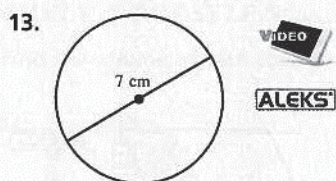
10. _____

11. _____

12. _____

ANSWERS

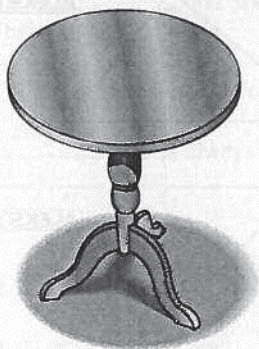
- 13. _____
- 14. _____
- 15. _____
- 16. _____
- 17. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____




Solve the applications.

17. **Crafts** A circular piece of lawn has a radius of 28 ft. You have a bag of fertilizer that will cover 2,500 ft² of lawn. Do you have enough?

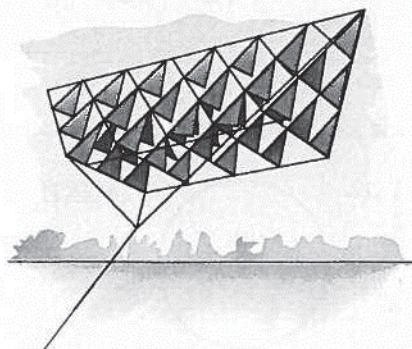
18. **Crafts** A circular coffee table has a diameter of 5 ft. What will it cost to have the top refinished if the company charges \$3 per square foot for the refinishing?



19. **Construction** A circular terrace has a radius of 6 ft. If it costs \$1.50 per square foot to pave the terrace with brick, what will the total cost be? 

20. **Construction** A house addition is in the shape of a semicircle (a half circle) with a radius of 9 ft. What is its area?

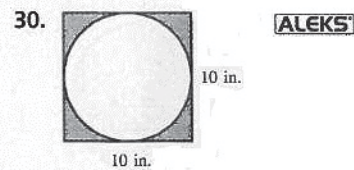
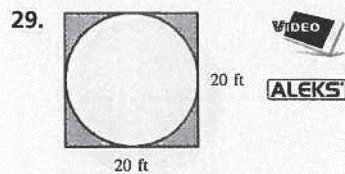
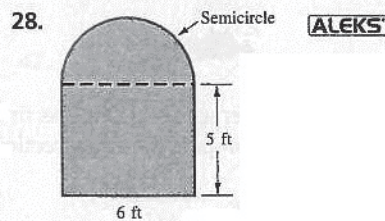
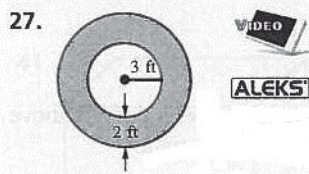
21. **Crafts** A Tetra-Kite uses 12 triangular pieces of plastic for its surface. Each triangle has a base of 12 in. and a height of 12 in. How much material is needed for the kite?



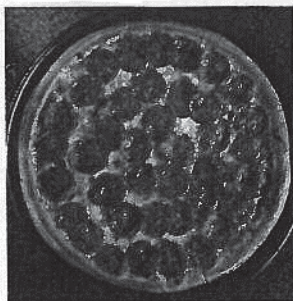
ANSWERS


22. **Construction** You buy a square lot that is 110 yd on each side. What is its size in acres? **ALEKS**
23. **Crafts** You are making rectangular posters 12 in. by 15 in. How many square feet of material will you need for four posters? **VIDEO** **ALEKS**
24. **Crafts** Andy is carpeting a recreation room 18 ft long and 12 ft wide. If the carpeting costs \$15 per square yard, what will be the total cost of the carpet?
25. **Construction** A shopping center is rectangular, with dimensions of 550 yd by 440 yd. What is its size in acres?
26. **Construction** An A-frame cabin has a triangular front with a base of 30 ft and a height of 20 ft. If the front is to be glass that costs \$3 per square foot, what will the glass cost?

Find the area of the shaded part in each figure. Round your answers to one decimal place.



31. Papa Doc's delivers pizza. The price of an 8-in.-diameter pizza is \$8.99, and the price of a 16-in.-diameter pizza is \$17.98. Write a plan to determine which is the better buy.




22. _____
23. _____
24. _____
25. _____
26. _____
27. _____
28. _____
29. _____
30. _____
31.  _____

ANSWERS

32. 

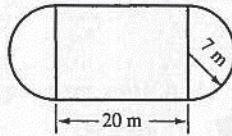
33. 

34. 

35. 

36. _____

32. An indoor track layout is shown.



How much would it cost to lay down hardwood floor to cover the entire track if the hardwood floor costs \$10.50 per square meter?

33. Find the area and the circumference (or perimeter) of each item:

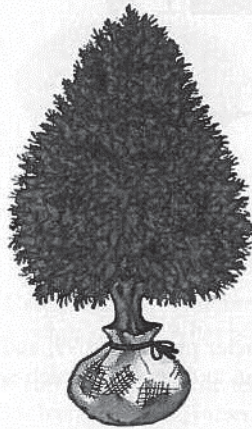
- (a) a penny (b) a nickel (c) a dime (d) a quarter (e) a half-dollar
- (f) a silver dollar (g) a Sacagawea dollar (h) a dollar bill
- (i) one face of the pyramid on the back of a \$1 bill.



34. How would you determine the cross-sectional area of a Douglas fir tree (at, say, 3 ft above the ground) without cutting it down? Use your method to solve this problem:



If the circumference of a Douglas fir is 6 ft 3 in., measured at a height of 3 ft above the ground, compute the cross-sectional area of the tree at that height.



35. What is the effect on the area of a triangle if the base is doubled and the altitude is cut in half? Create some examples to demonstrate your ideas.

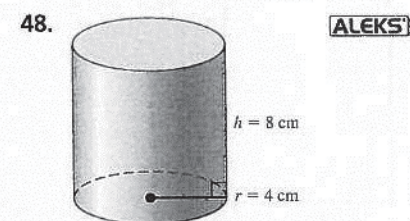
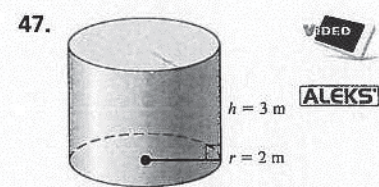
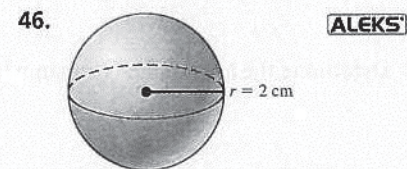
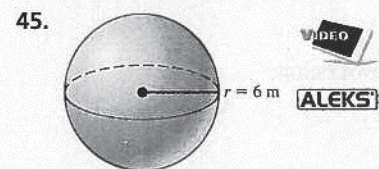
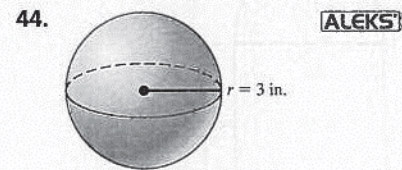
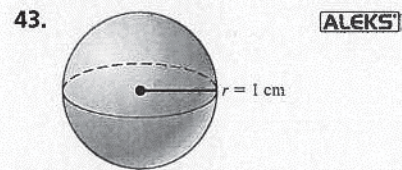
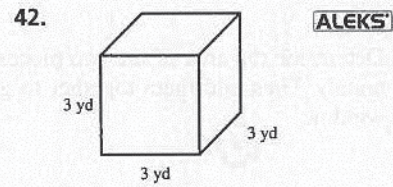
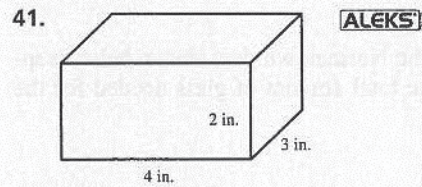
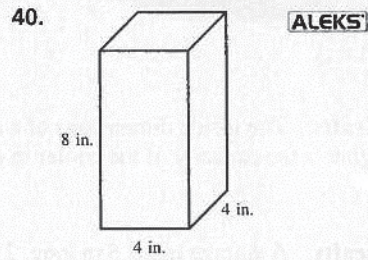
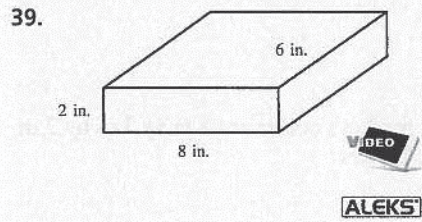
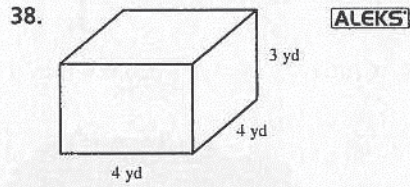
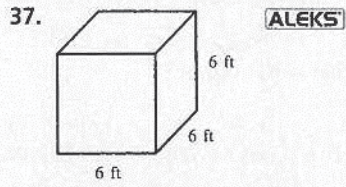


36. What happens to the area of a circle if you double the radius? If you double the diameter? If you triple the radius? Create some examples to demonstrate your answers.



ANSWERS

Find the volume of each solid shown. Where appropriate, use 3.14 as an approximation for π and round to the nearest tenth.



- 37. _____
- 38. _____
- 39. _____
- 40. _____
- 41. _____
- 42. _____
- 43. _____
- 44. _____
- 45. _____
- 46. _____
- 47. _____
- 48. _____

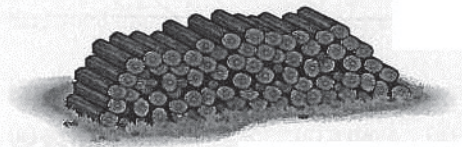
ANSWERS

- 49. _____
- 50. _____
- 51. _____
- 52. _____
- 53. _____
- 54. _____

Solve the applications.

49. Business and Finance A shipping container is 5 ft by 3 ft by 2 ft. What is its volume?

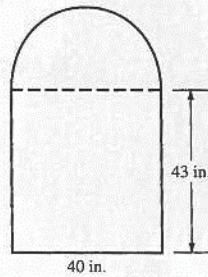
50. Crafts A cord of wood is 4 ft by 4 ft by 8 ft. What is its volume?



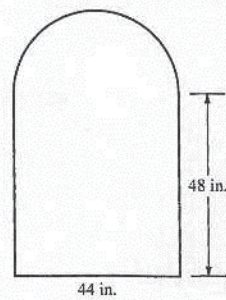
51. Crafts The inside dimensions of a meat market's cooler are 3 m by 3 m by 2 m. What is the capacity of the cooler in cubic meters?

52. Crafts A storage bin is 6 m long, 2 m wide, and 2 m high. What is its volume in cubic meters?




53. Determine the area of the two pieces of the Norman window shown below, separately. Then add them together to get the total amount of glass needed for the window.



54. Determine the area of the Norman window shown below.



Answers

1. 28 m^2 3. 12 yd^2 5. 20 ft^2 7. 54 in.^2 9. 24 cm^2
11. 153.9 in.^2 13. 38.5 cm^2 15. 9.6 yd^2 17. yes; $\approx 2,461.8 \text{ ft}^2$
19. $\approx \$169.56$ 21. 864 in.^2 23. 5 ft^2 25. 50 acres 27. 50.2 ft^2
29. 86 ft^2 31.  33.  35.  37. 216 ft^3
39. 96 in.^3 41. 24 in.^3 43. $\approx 4.2 \text{ cm}^3$ 45. 904.3 m^3 47. $\approx 37.7 \text{ m}^3$
49. 30 ft^3 51. 18 m^3 53. $1,720 \text{ sq in.}; \approx 628.3 \text{ sq in.}; \approx 2,348.3 \text{ sq in.}$