

Name _____

Date _____

CHAPTER 6 Chapter Test B
For use after Chapter 6

Simplify the ratio.

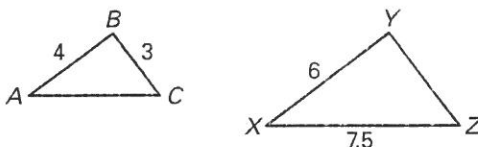
1. \$25 : \$5 2. $\frac{40 \text{ cm}}{2 \text{ cm}}$ 3. $\frac{1 \text{ mi}}{10 \text{ ft}}$
 4. $\frac{9 \text{ ft}}{12 \text{ in.}}$ 5. 3 L : 100 mL 6. $\frac{3 \text{ gallons}}{4 \text{ quarts}}$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

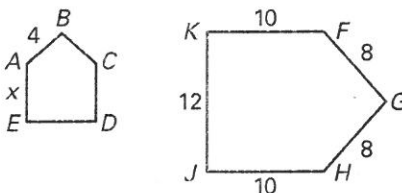
In the diagram, $\triangle ABC \sim \triangle XYZ$.

7. Find YZ .
 8. Find AC .

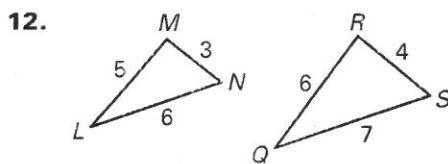
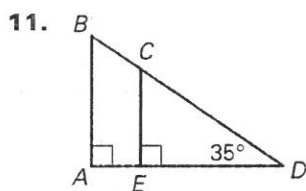


In the diagram, $ABCDE \sim FGHIJK$.

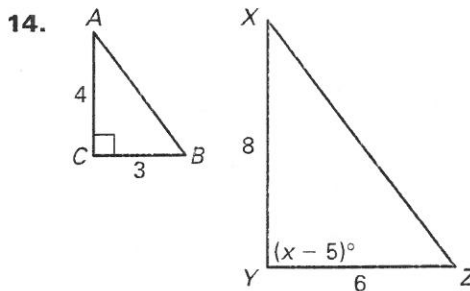
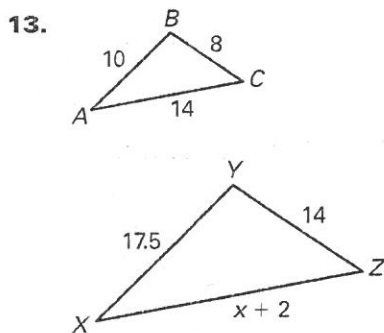
9. Find the value of x .
 10. Find the perimeter of $ABCDE$.



Determine whether the triangles are similar. If so, write a similarity statement and the postulate or theorem that justifies your answer.



Determine the value of x that makes $\triangle ABC \sim \triangle XYZ$.

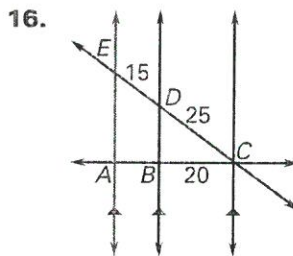
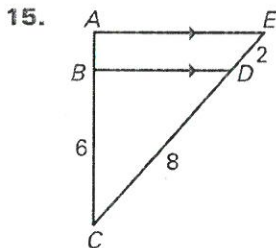


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CHAPTER 6

Chapter Test B *continued*
For use after Chapter 6

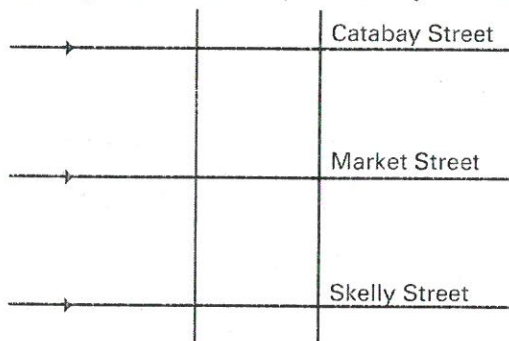
In Exercises 15 and 16, find the length of \overline{AB} .



Answers

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

- 17. A photographer is enlarging an original photo that measures 8 inches by 10 inches. The enlargement is 16 inches by 20 inches. What is the scale factor of the enlargement?
- 18. An architect is making a drawing of a house to scale. The door of the house is 72 inches tall by 36 inches wide. The drawing of the door is 6 inches tall by 3 inches wide. What is the scale factor of the reduction?
- 19. The perimeter of a rectangle is 24 inches. The ratio of the length to the width is 2 : 1. Find the length and the width.
- 20. The perimeter of a rectangle is 65 inches. The ratio of the length to the width is 4 : 1. Find the length and the width.
- 21. You are making a scale model of your neighborhood. The distance between two consecutive parallel streets is 200 feet. You use a scale factor of $\frac{1}{80}$ to build your model. What is the distance between Catabay Street and Skelly Street on your model?



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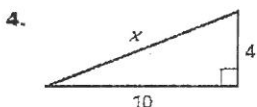
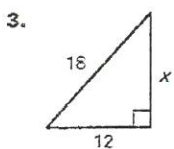
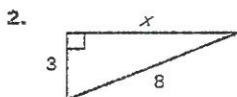
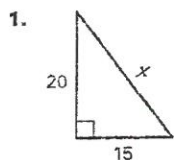
Date _____

CHAPTER 7 Chapter Test B

For use after Chapter 7

Find the value of x . Write your answer in simplest radical form.

Answers



Classify the triangle as *acute*, *right*, or *obtuse*.

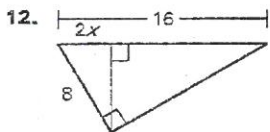
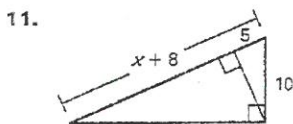
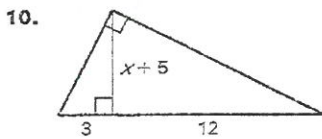
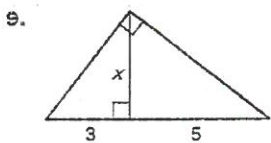
5. 5, 7, 9

6. 3, 5, $\sqrt{34}$

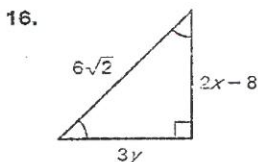
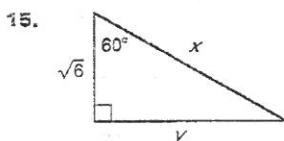
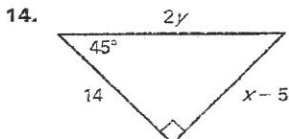
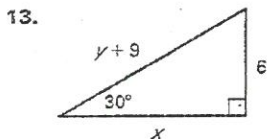
7. 3.1, 4.5, 5.2

8. 9, 15, $10\sqrt{3}$

Find the exact value of x .



Find the value of each variable. Write your answer in simplest radical form.



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____
15. _____
16. _____

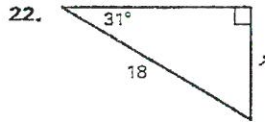
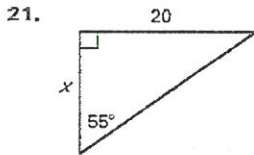
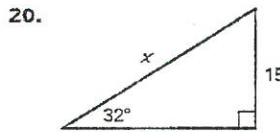
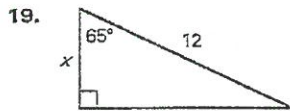
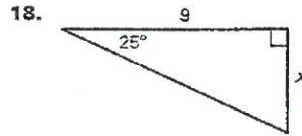
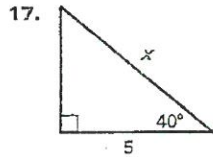
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CHAPTER 7 **Chapter Test B** *continued*
For use after Chapter 7

Find the value of x . Round your answer to the nearest tenth.



Answers

17. _____

18. _____

19. _____

20. _____

21. _____

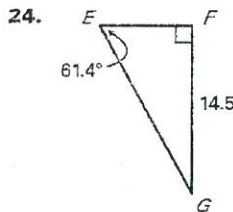
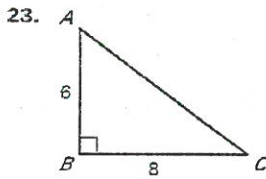
22. _____

23. _____

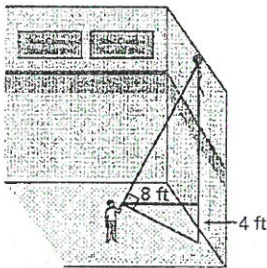
24. _____

25. _____

Solve the right triangle. Round your answer to the nearest tenth.



25. A balloon rises to the ceiling of a gymnasium. You want to find the distance from the ground to the balloon. You use a cardboard square to line up the balloon and the ground. Your friend measures the vertical distance from the ground to your eye and the distance from you to the gym wall. Approximate the distance from the ground to the balloon.



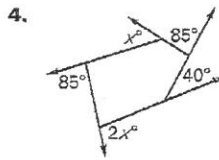
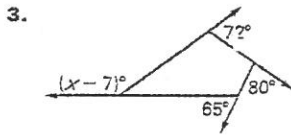
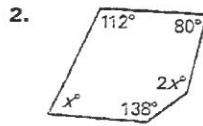
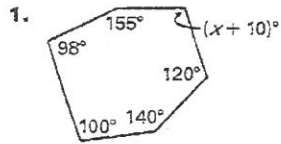
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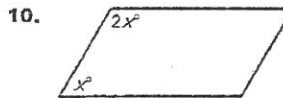
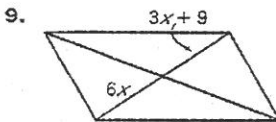
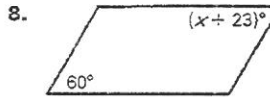
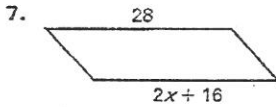
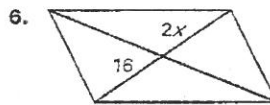
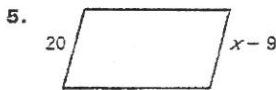
Date _____

CHAPTER 8 **Chapter Test B**
For use after Chapter 8

Find the value of x .



Find the value of x in the parallelogram.



Three of the vertices of $\square ABCD$ are given. Find the coordinates of point D .

11. $A(3, 6), B(6, 7), C(6, 3), D(x, y)$
12. $A(-3, -4), B(-3, 2), C(-1, 4), D(x, y)$
13. $A(6, 0), B(0, 4), C(-4, 2), D(x, y)$
14. $A(-1, 0), B(4, -1), C(2, -4), D(x, y)$

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

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Date _____

CHAPTER 8 **Chapter Test B** *continued*
For use after Chapter 8

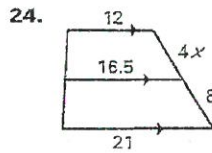
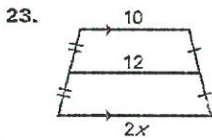
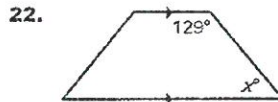
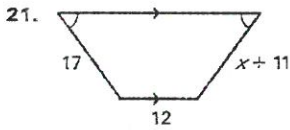
For any rectangle $CMXZ$, decide whether the statement is *always, sometimes, or never true*.

15. $\overline{CM} \cong \overline{MX}$ 16. $\overline{ZX} \cong \overline{CM}$
 17. $\angle Z \cong \angle M$ 18. $\overline{ZM} \cong \overline{CX}$
 19. $\overline{CM} \perp \overline{ZX}$ 20. $\angle CMZ \cong \angle XZM$

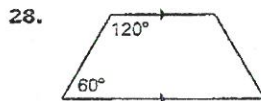
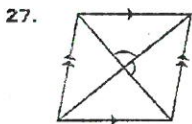
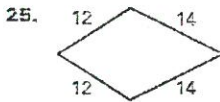
Answers

15. _____
 16. _____
 17. _____
 18. _____
 19. _____
 20. _____
 21. _____
 22. _____
 23. _____
 24. _____
 25. _____
 26. _____
 27. _____
 28. _____
 29. _____

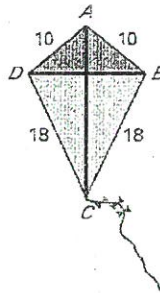
Find the value of x .



Give the most specific name for the quadrilateral.



29. In the kite shown, $m\angle ADC = 105^\circ$ and $m\angle DAB = 100^\circ$. Find $m\angle DCB$.



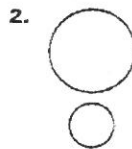
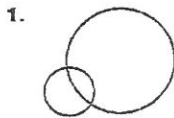
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CHAPTER 10 Chapter Test B
For use after Chapter 10

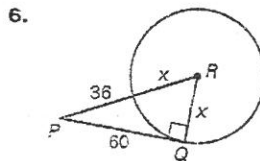
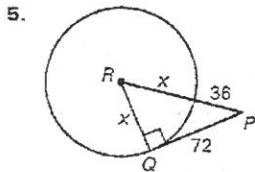
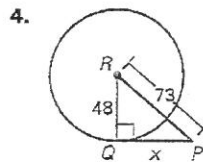
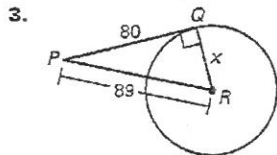
Tell how many common tangents the given circles have.



Answers

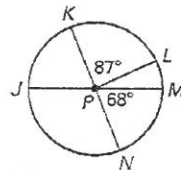
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____
14. _____

\overline{QR} is a radius of $\odot R$ and \overline{PQ} is tangent to $\odot R$. Find the value of x .



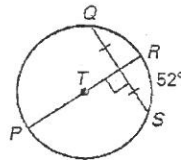
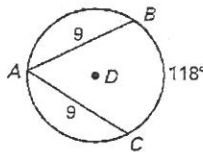
\overline{JM} and \overline{KN} are diameters of $\odot P$. Identify the given arc as a *major arc*, *minor arc*, or *semicircle*. Then find the measure of the arc.

- | | |
|---------------------|----------------------|
| 7. $m\widehat{MN}$ | 8. $m\widehat{LM}$ |
| 9. $m\widehat{KLN}$ | 10. $m\widehat{JLN}$ |
| 11. $m\widehat{JN}$ | 12. $m\widehat{NJL}$ |



Find the measure of the given arc.

- | | |
|---------------------|----------------------|
| 13. $m\widehat{AC}$ | 14. $m\widehat{QRS}$ |
|---------------------|----------------------|

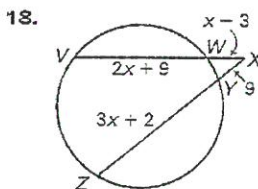
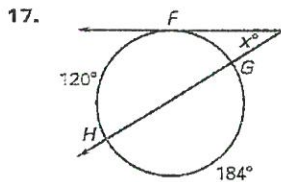
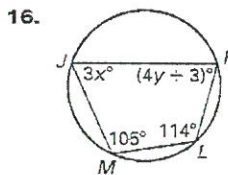
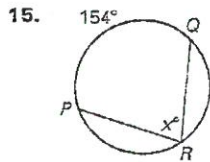


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Date _____

CHAPTER 10 **Chapter Test B** *continued*
For use after Chapter 10

Find the value(s) of the variable(s).



Answers

15. _____

16. _____

17. _____

18. _____

19. _____

20. _____

21. _____

22. _____

23. _____

24. _____

25. _____

Write the standard equation of the circle with the given center and radius.

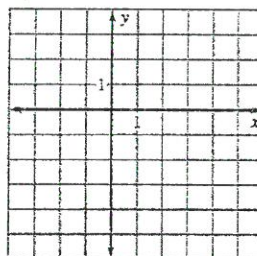
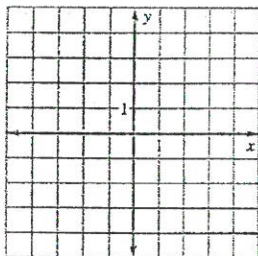
19. Center $(-4, 7)$, radius 6

20. Center $(3, -9)$, radius 8.4

Graph the equation.

21. $(x - 3)^2 + (y - 2)^2 = 1$

22. $(x - 4)^2 + (y + 4)^2 = 2$



23. You are standing 9 meters from a circular pond. The distance from you to a point of tangency on the pond is 51 meters. What is the radius of the pond?

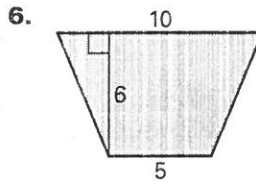
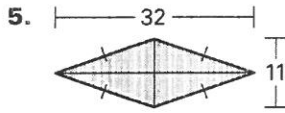
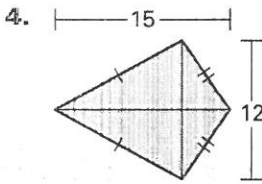
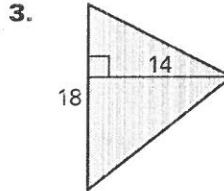
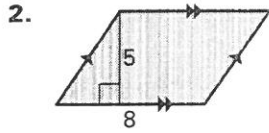
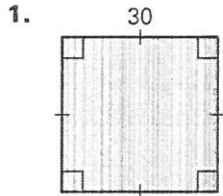
24. A wagon wheel has 14 spokes. What is the measure of the angle between any two spokes? Round your answer to the nearest tenth.

25. Two spokes in the wagon wheel in Exercise 24 form a central angle of about 128.5° . How many spokes are between the two spokes?

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CHAPTER 11 **Chapter Test A**
For use after Chapter 11

Find the area of the figure. Round answers to the nearest tenth, if necessary.

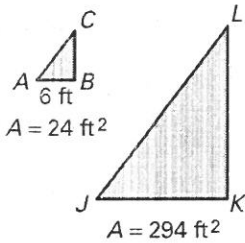


Answers

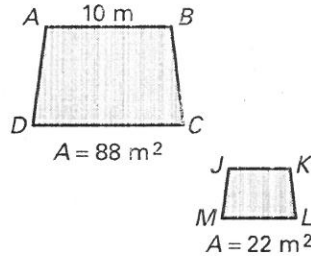
1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____
13. _____

Use the given area to find JK.

7. $\triangle ABC \sim \triangle JKL$

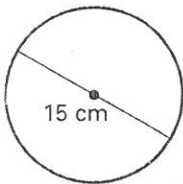


8. $ABCD \sim JKLM$

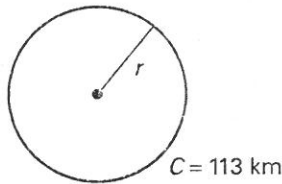


Use the diagram to find the indicated measure.

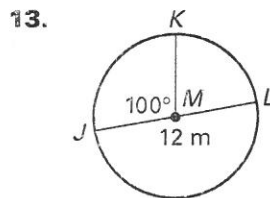
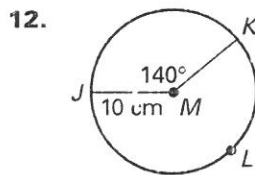
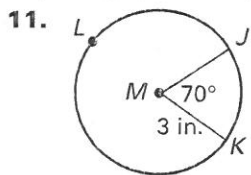
9. Find the circumference.



10. Find the radius.



Find the length of JK. Round answers to the nearest tenth.

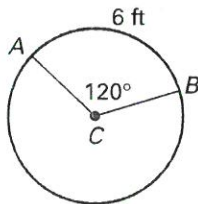


CHAPTER
11

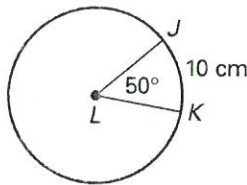
Chapter Test A *continued*
For use after Chapter 11

Find the indicated measure. Round answers to the nearest tenth.

14. Radius of $\odot C$



15. Circumference of $\odot L$



The equation of a circle is given. Find the circumference of the circle. Write the circumference in terms of π .

16. $x^2 + y^2 = 4$

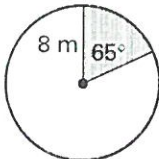
17. $(x - 1)^2 + (y - 2)^2 = 1$

Tell whether the following postulates in Euclidean geometry are also true in spherical geometry.

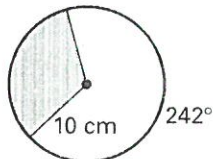
- 18. A plane contains at least three noncollinear points.
- 19. A line contains at least two points.

Find the area of the shaded region. Round answers to the nearest tenth.

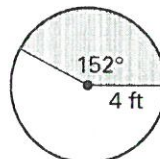
20.



21.

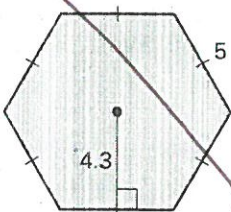


22.

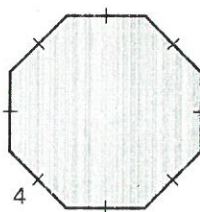


Find the area of the regular polygon. Round answers to the nearest tenth, if necessary.

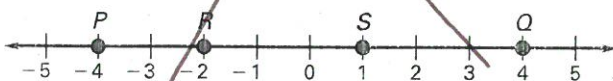
23.



24.



Find the probability that a point K , selected randomly on \overline{PQ} , is on the given segment. Express your answer as a fraction, decimal, and percent.



25. \overline{RS}

26. \overline{PS}

27. \overline{RQ}

Answers

- 14. _____
- 15. _____
- 16. _____
- 17. _____
- 18. _____
- 19. _____
- 20. _____
- 21. _____
- 22. _____
- 23. _____
- 24. _____
- 25. _____
- 26. _____
- 27. _____