NAME _____ DATE _____ PERIOD _____

8

Chapter 8 Test, Form 2A

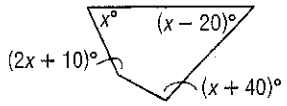
SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

1. Find the sum of the measures of the interior angles of a convex 45-gon. 1. _____

   A. 8100 **B.** 7740 **C.** 360 **D.** 172

2. Find x. 2. _____



   A. 30 **B.** 66

   C. 102 **D.** 138

3. Find the sum of the measures of the exterior angles of a convex 39-gon. 3. _____

   A. 39 **B.** 90 **C.** 180 **D.** 360

4. Which of the following is a property of a parallelogram? 4. _____

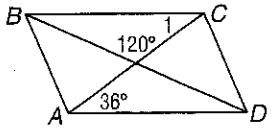
   A. Each pair of opposite sides is congruent.

   B. Only one pair of opposite angles is congruent.

   C. Each pair of opposite angles is supplementary.

   D. There are four right angles.

5. Find $m\angle 1$ in parallelogram $ABCD$. 5. _____



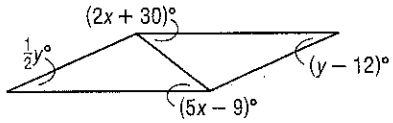
   A. 60 **B.** 54

   C. 36 **D.** 18

6. $ABCD$ is a parallelogram with diagonals intersecting at E. If $AE = 3x + 12$ and $EC = 27$, find x. 6. _____

   A. 5 **B.** 17 **C.** 27 **D.** 47

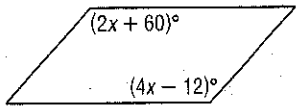
7. Find x and y so that this quadrilateral is a parallelogram. 7. _____



   A. $x = 13, y = 24$ **B.** $x = 13, y = 6$

   C. $x = 7, y = 24$ **D.** $x = 7, y = 6$

8. Find x so that this quadrilateral is a parallelogram. 8. _____



   A. 12 **B.** 24

   C. 36 **D.** 132

9. Given $A(8, 2)$, $B(6, -4)$, $C(-5, -4)$, find the coordinates of D so that $ABCD$ is a parallelogram. 9. _____

   A. $D(-5, 2)$ **B.** $D(-3, 2)$ **C.** $D(-2, 2)$ **D.** $D(-4, 8)$

10. $ABCD$ is a rectangle. If $AC = 5x + 2$ and $BD = x + 22$, find x. 10. _____

    A. 5 **B.** 6 **C.** 11 **D.** 26

11. Which of the following is true for all rectangles? 11. _____

    A. The diagonals are perpendicular.

    B. The diagonals bisect the angles.

    C. The consecutive sides are congruent.

    D. The consecutive sides are perpendicular.

Assessments

NAME _____ DATE _____ PERIOD _____

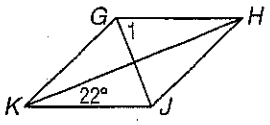
8

Chapter 8 Test, Form 2A *(continued)*

12. $ABCD$ is a rectangle with $B(-4, 6)$, $C(-4, 2)$, and $D(10, 2)$. Find the coordinates of A. **12.** _____

A. $A(6, 4)$ **B.** $A(10, 4)$ **C.** $A(2, 6)$ **D.** $A(10, 6)$

13. Find $m\angle 1$ in rhombus $GHJK$. **13.** _____



A. 22 **B.** 44

C. 68 **D.** 90

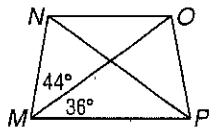
14. The diagonals of square $ABCD$ intersect at E. If $AE = 2x + 6$ and $BD = 6x - 10$, find AC. **14.** _____

A. 11 **B.** 28 **C.** 56 **D.** 90

15. $ABCD$ is an isosceles trapezoid with $A(10, -1)$, $B(8, 3)$, and $C(-1, 3)$. Find the coordinates of D. **15.** _____

A. $(-3, -1)$ **B.** $(-10, -11)$ **C.** $(-1, 8)$ **D.** $(-3, 3)$

16. For isosceles trapezoid $MNOP$, find $m\angle MNP$. **16.** _____



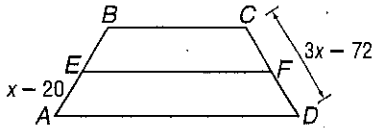
A. 44 **B.** 64

C. 80 **D.** 116

17. The length of one base of a trapezoid is 19 inches and the length of the median is 16 inches. Find the length of the other base. **17.** _____

A. 35 in. **B.** 19 in. **C.** 17.5 in. **D.** 13 in.

18. $\overline{EF}$ is the median of isosceles trapezoid $ABCD$. Find x. **18.** _____



A. $2x - 46$ **B.** 32

C. 46 **D.** 68

19. What type of quadrilateral has vertices at $(0, 0)$, (a, b), (c, b), and $(c + a, 0)$? **19.** _____

A. parallelogram **B.** rectangle

C. rhombus **D.** trapezoid

20. To prove that the diagonals of a rhombus are perpendicular to each other, you would position and label a rhombus on a coordinate plane and then find which of the following? **20.** _____

A. measures of the angles **B.** slopes of the diagonals

C. lengths of the diagonals **D.** midpoints of the diagonals

bases	kite	rectangle	square
diagonals	median	rhombus	trapezoid
isosceles trapezoid	parallelogram		

Choose from the terms above to complete each sentence.

21. A quadrilateral with only one pair of opposite sides parallel and the other pair of opposite sides congruent is a(n) ___?___. 21. _____

22. A quadrilateral with two pairs of opposite sides parallel is a(n) ___?___. 22. _____

23. A quadrilateral with only one pair of opposite sides parallel is a(n) ___?___. 23. _____

24. A quadrilateral that is both a rectangle and a rhombus is a(n) ___?___. 24. _____

25. A quadrilateral with four congruent sides is a(n) ___?___. 25. _____

26. A quadrilateral with four right angles is a(n) ___?___. 26. _____

27. A quadrilateral with two pairs of congruent consecutive sides is a(n) ___?___. 27. _____

28. Segments that join opposite vertices in a quadrilateral are called ___?___. 28. _____

29. The segment joining the midpoints of the nonparallel sides of a trapezoid is called the ___?___. 29. _____

30. The parallel sides of a trapezoid are called the ___?___. 30. _____

For Questions 31-37, write *true* or *false*.

31. A rectangle is always a parallelogram. 31. _____

32. The diagonals of a rhombus are always perpendicular. 32. _____

33. The diagonals of a square always bisect each other. 33. _____

34. A trapezoid always has two congruent sides. 34. _____

35. The median of a trapezoid is always parallel to the bases. 35. _____

36. A quadrilateral with vertices $(a, 0)$, (b, c), $(-b, c)$, and $(-a, 0)$ is an isosceles trapezoid. 36. _____

37. If the diagonals of a parallelogram are perpendicular, then the parallelogram is a rectangle. 37. _____

Bonus In parallelogram $ABCD$, $AB = 2x - 7$, $BC = x + 3y$, $CD = x + y$, and $AD = 2x - y - 1$. Find x and y. **B:** _____

NAME Key DATE _____ PERIOD _____

8 Chapter 8 Test, Form 2A

SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

1. Find the sum of the measures of the interior angles of a convex 45-gon. 1. B

(45-2)×180

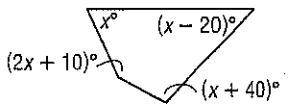
A. 8100 **B.** 7740 **C.** 360 **D.** 172

2. Find x. 2. B

$x+x-20+2x+10+x+40=360$

$5x+30=360$

$5x=330$ $x=66$



A. 30 **B.** 66

C. 102 **D.** 138

3. Find the sum of the measures of the exterior angles of a convex 39-gon. 3. D

A. 39 **B.** 90 **C.** 180 **D.** 360

always

4. Which of the following is a property of a parallelogram? 4. A

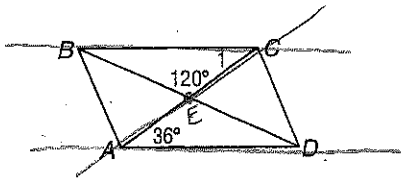
A. Each pair of opposite sides is congruent.

B. Only one pair of opposite angles is congruent.

C. Each pair of opposite angles is supplementary.

D. There are four right angles.

5. Find $m\angle 1$ in parallelogram $ABCD$. 5. C



A. 60 **B.** 54

C. 36 **D.** 18

Parallel lines cut by trans then alt. int. ∠s are ≅

6. $ABCD$ is a parallelogram with diagonals intersecting at E. If $AE = 3x + 12$ and $EC = 27$, find x. 6. A

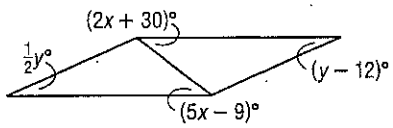
$3x+12=27$

$3x=15$

$x=5$

A. 5 **B.** 17 **C.** 27 **D.** 47

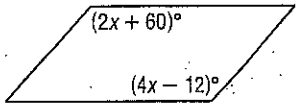
7. Find x and y so that this quadrilateral is a parallelogram. 7. A



A. $x = 13, y = 24$ **B.** $x = 13, y = 6$

C. $x = 7, y = 24$ **D.** $x = 7, y = 6$

8. Find x so that this quadrilateral is a parallelogram. 8. C



A. 12 **B.** 24

C. 36 **D.** 132

9. Given $A(8, 2)$, $B(6, -4)$, $C(-5, -4)$, find the coordinates of D so that $ABCD$ is a parallelogram. 9. B

A. $D(-5, 2)$ **B.** $D(-3, 2)$ **C.** $D(-2, 2)$ **D.** $D(-4, 8)$

10. $ABCD$ is a rectangle. If $AC = 5x + 2$ and $BD = x + 22$, find x. 10. A

A. 5 **B.** 6 **C.** 11 **D.** 26

11. Which of the following is true for all rectangles? 11. D

A. The diagonals are perpendicular.

B. The diagonals bisect the angles.

C. The consecutive sides are congruent.

D. The consecutive sides are perpendicular.

Assessments

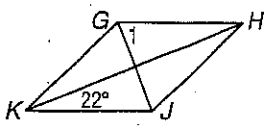
NAME _____ DATE _____ PERIOD _____

Chapter 8 Test, Form 2A *(continued)*

12. $ABCD$ is a rectangle with $B(-4, 6)$, $C(-4, 2)$, and $D(10, 2)$. Find the coordinates of A. **12.** D

A. $A(6, 4)$ **B.** $A(10, 4)$ **C.** $A(2, 6)$ **D.** $A(10, 6)$

13. Find $m\angle 1$ in rhombus $GHJK$. **13.** C



A. 22 **B.** 44

C. 68 **D.** 90

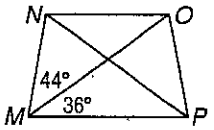
14. The diagonals of square $ABCD$ intersect at E. If $AE = 2x + 6$ and $BD = 6x - 10$, find AC. **14.** C

A. 11 **B.** 28 **C.** 56 **D.** 90

15. $ABCD$ is an isosceles trapezoid with $A(10, -1)$, $B(8, 3)$, and $C(-1, 3)$. Find the coordinates of D. **15.** A

A. $(-3, -1)$ **B.** $(-10, -11)$ **C.** $(-1, 8)$ **D.** $(-3, 3)$

16. For isosceles trapezoid $MNOP$, find $m\angle MNP$. **16.** B



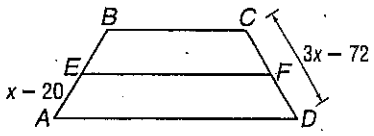
A. 44 **B.** 64

C. 80 **D.** 116

17. The length of one base of a trapezoid is 19 inches and the length of the median is 16 inches. Find the length of the other base. **17.** D

A. 35 in. **B.** 19 in. **C.** 17.5 in. **D.** 13 in.

18. $\overline{EF}$ is the median of isosceles trapezoid $ABCD$. Find x. **18.** B



A. $2x - 46$ **B.** 32

C. 46 **D.** 68

19. What type of quadrilateral has vertices at $(0, 0)$, (a, b), (c, b), and $(c + a, 0)$? **19.** D

A. parallelogram **B.** rectangle

C. rhombus **D.** trapezoid

20. To prove that the diagonals of a rhombus are perpendicular to each other, you would position and label a rhombus on a coordinate plane and then find which of the following? **20.** B

A. measures of the angles **B.** slopes of the diagonals

C. lengths of the diagonals **D.** midpoints of the diagonals

bases	kite	rectangle	square
diagonals	median	rhombus	trapezoid
isosceles trapezoid	parallelogram		

Choose from the terms above to complete each sentence.

21. A quadrilateral with only one pair of opposite sides parallel and the other pair of opposite sides congruent is a(n) ___?___. 21. Isosceles Trapezoid

22. A quadrilateral with two pairs of opposite sides parallel is a(n) ___?___. 22. parallelogram

23. A quadrilateral with only one pair of opposite sides parallel is a(n) ___?___. 23. Trapezoid

24. A quadrilateral that is both a rectangle and a rhombus is a(n) ___?___. 24. Square

25. A quadrilateral with four congruent sides is a(n) ___?___. 25. rhombus

26. A quadrilateral with four right angles is a(n) ___?___. 26. rectangle

27. A quadrilateral with two pairs of congruent consecutive sides is a(n) ___?___. 27. kite

28. Segments that join opposite vertices in a quadrilateral are called ___?___. 28. diagonals

29. The segment joining the midpoints of the nonparallel sides of a trapezoid is called the ___?___. 29. median

30. The parallel sides of a trapezoid are called the ___?___. 30. bases

For Questions 31-37, write *true* or *false*.

31. A rectangle is always a parallelogram. 31. true

32. The diagonals of a rhombus are always perpendicular. 32. true

33. The diagonals of a square always bisect each other. 33. true

34. A trapezoid always has two congruent sides. 34. false

35. The median of a trapezoid is always parallel to the bases. 35. true

36. A quadrilateral with vertices $(a, 0)$, (b, c), $(-b, c)$, and $(-a, 0)$ is an isosceles trapezoid. 36.

37. If the diagonals of a parallelogram are perpendicular, then the parallelogram is a rectangle. 37. False

Bonus In parallelogram $ABCD$, $AB = 2x - 7$, $BC = x + 3y$, $CD = x + y$, and $AD = 2x - y - 1$. Find x and y. **B:** $x=9$, $y=2$

NAME _____ DATE _____ PERIOD _____

10

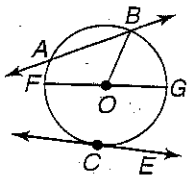
Chapter 10 Test, Form 1

SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1–3, use $\odot O$.

1. Name a diameter.



A. $\overline{FG}$ **B.** $\overline{AB}$ **C.** $\overrightarrow{AB}$ **D.** $\overrightarrow{CE}$ 1. _____

2. Name a chord.

A. $\overline{FO}$ **B.** $\overline{AB}$ **C.** $\overrightarrow{AB}$ **D.** $\overrightarrow{CE}$ 2. _____

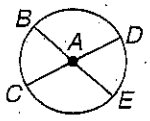
3. Name a secant.

A. $\overline{FO}$ **B.** $\overline{AB}$ **C.** $\overrightarrow{AB}$ **D.** $\overrightarrow{CE}$ 3. _____

4. If the diameter of a circle is 10 inches, find the circumference to the nearest hundredth.

A. 15.71 in. **B.** 31.42 in. **C.** 62.83 in. **D.** 314.16 in. 4. _____

5. If $m\angle BAD = 110$ in $\odot A$, find $m\overset{\frown}{DE}$.



A. 35 **B.** 55 **C.** 70 **D.** 110 5. _____

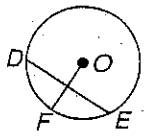
6. Points X and Y lie on $\odot P$ so that $PX = 5$ meters and $m\angle XPY = 90$. Find the length of $\overline{XY}$ to the nearest hundredth.

A. 3.93 m **B.** 7.85 m **C.** 15.71 m **D.** 19.63 m 6. _____

7. Chords $\overline{XY}$ and $\overline{WV}$ are equidistant from the center of $\odot O$. If $XY = 2x + 30$ and $WV = 5x - 12$, find x.

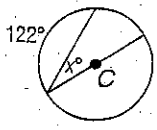
A. 58 **B.** 28 **C.** 14 **D.** 6 7. _____

8. Find the radius of $\odot O$ if $DE = 12$ inches and $\overline{DE}$ bisects $\overline{OF}$.



A. $2\sqrt{3}$ in. **B.** 6 in. **C.** 8 in. **D.** $4\sqrt{3}$ in. 8. _____

9. Find x.

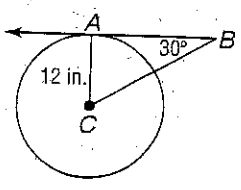


A. 122 **B.** 61 **C.** 58 **D.** 29 9. _____

10. $EFGH$ is a quadrilateral inscribed in $\odot P$ with $m\angle E = 72$ and $m\angle F = 49$. Find $m\angle H$.

A. 131 **B.** 108 **C.** 90 **D.** 57 10. _____

11. If $\overline{AB}$ is tangent to $\odot C$ at A, find BC.



A. 6 in. **B.** $4\sqrt{3}$ in. **C.** $12\sqrt{3}$ in. **D.** 24 in. 11. _____

Assessments

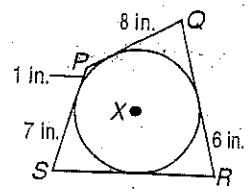
NAME _____ DATE _____ PERIOD _____

10

Chapter 10 Test, Form 1 *(continued)*

12. $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, and $\overline{SP}$ are tangent to $\odot X$. Find RS. **12.** _____

A. 9 in. **B.** 12 in.
C. 13 in. **D.** cannot tell

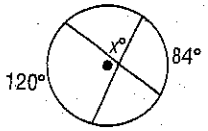


13. $\odot A$ has its center at $A(3, 2)$, and $\overline{CB}$ is tangent to $\odot A$ at $B(6, 4)$. Find the slope of $\overline{CB}$. **13.** _____

A. 1 **B.** $\frac{1}{2}$ **C.** $-\frac{3}{2}$ **D.** $-\frac{1}{2}$

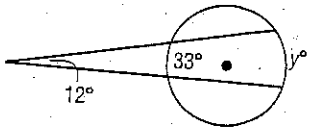
14. Find x. **14.** _____

A. 78 **B.** 90
C. 102 **D.** 156



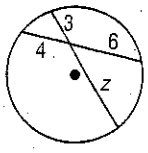
15. Find y. **15.** _____

A. 66 **B.** 57
C. 45 **D.** 21



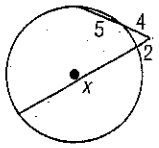
16. Find z. **16.** _____

A. 2 **B.** 4.5
C. 7 **D.** 8



17. Find x. **17.** _____

A. 4 **B.** 16
C. 22 **D.** 32



18. Find the center of the circle whose equation is $(x + 11)^2 + (y - 7)^2 = 121$. **18.** _____

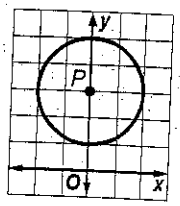
A. $(-11, 7)$ **B.** $(11, -7)$ **C.** $(121, 49)$ **D.** 11

19. Find the equation of a circle whose center is at (2, 3) and radius is 6. **19.** _____

A. $(x + 2)^2 + (y + 3)^2 = 6$ **B.** $(x - 2)^2 + (y - 3)^2 = 6$
C. $(x + 2)^2 + (y + 3)^2 = 36$ **D.** $(x - 2)^2 + (y - 3)^2 = 36$

20. Find the equation of $\odot P$. **20.** _____

A. $x^2 + (y - 3)^2 = 4$ **B.** $x^2 + (y - 3)^2 = 2$
C. $(x - 3)^2 + y^2 = 2$ **D.** $(x - 3)^2 + y^2 = 4$



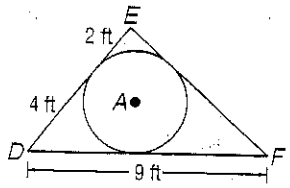
NAME _____ DATE _____ PERIOD _____

10

Chapter 10 Test, Form 1 *(continued)*

21. If $\overline{DE}$, $\overline{EF}$, and $\overline{FD}$ are tangent to $\odot A$, find EF.

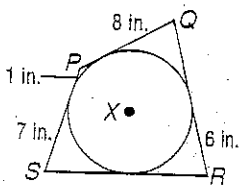
A. 9 ft
B. 8 ft
C. 7 ft
D. 6 ft



21. _____

22. $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, and $\overline{SP}$ are tangent to $\odot X$. Find RS.

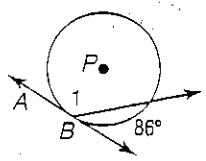
A. 9 in.
B. 12 in.
C. 13 in.
D. cannot tell



22. _____

23. If $\overline{AB}$ is tangent to $\odot P$ at B, find $m\angle 1$.

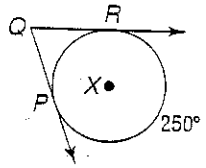
A. 43
B. 86
C. 137
D. 274



23. _____

24. Find $m\angle PQR$ if $\overline{QP}$ and $\overline{QR}$ are tangent to $\odot X$.

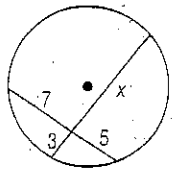
A. 70
B. 110
C. 125
D. 140



24. _____

25. Find x.

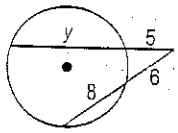
A. $\frac{15}{7}$
B. 5
C. 9
D. $\frac{35}{3}$



25. _____

26. Find y.

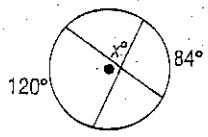
A. 7
B. $\frac{48}{5}$
C. $\frac{59}{5}$
D. $\frac{288}{25}$



26. _____

27. Find x.

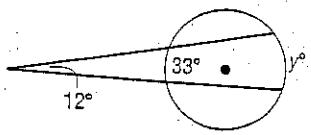
A. 78
B. 90
C. 102
D. 156



27. _____

28. Find y.

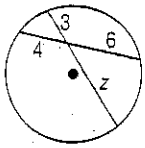
A. 66
B. 57
C. 45
D. 21



28. _____

29. Find z.

A. 2
B. 4.5
C. 7
D. 8



29. _____

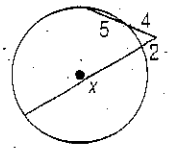
NAME _____ DATE _____ PERIOD _____

10

Chapter 10 Test, Form 1 *(continued)*

30. Find x.

A. 4 B. 16 C. 22 D. 32



30. _____

31. Find the center of the circle whose equation is $(x + 11)^2 + (y - 7)^2 = 121$.

A. $(-11, 7)$ B. $(11, -7)$ C. $(121, 49)$ D. 11

31. _____

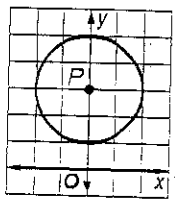
32. Find the equation of a circle whose center is at $(2, 3)$ and radius is 6.

A. $(x + 2)^2 + (y + 3)^2 = 6$ B. $(x - 2)^2 + (y - 3)^2 = 6$
C. $(x + 2)^2 + (y + 3)^2 = 36$ D. $(x - 2)^2 + (y - 3)^2 = 36$

32. _____

33. Find the equation of $\odot P$.

A. $x^2 + (y - 3)^2 = 4$ B. $x^2 + (y - 3)^2 = 2$
C. $(x - 3)^2 + y^2 = 2$ D. $(x - 3)^2 + y^2 = 4$



33. _____

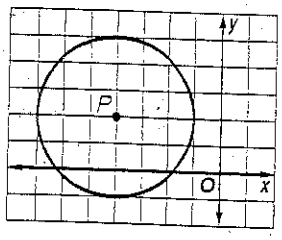
34. Find the equation of a circle whose center is at $(-1, 5)$ and radius is 8.

A. $(x - 1)^2 + (y + 5)^2 = 8$ B. $(x - 1)^2 + (y + 5)^2 = 64$
C. $(x + 1)^2 + (y - 5)^2 = 8$ D. $(x + 1)^2 + (y - 5)^2 = 64$

34. _____

35. Find the equation of $\odot P$.

A. $(x + 4)^2 + (y - 2)^2 = 3$
B. $(x + 4)^2 + (y - 2)^2 = 9$
C. $(x - 4)^2 + (y + 2)^2 = 3$
D. $(x - 4)^2 + (y + 2)^2 = 9$



35. _____

Extra Credit

$\odot A$ has its center at $A(3, 2)$, and $\overline{CB}$ is tangent to $\odot A$ at $B(6, 4)$. Find the slope of $\overline{CB}$. Show Work!

A. 1 B. $\frac{1}{2}$ C. $-\frac{3}{2}$ D. $-\frac{1}{2}$

a. Explain the difference between the length of an arc and the measure of an arc.

b. Is it possible for two arcs to have the same measure but not the same length? Explain your answer.

NAME Key DATE _____ PERIOD _____

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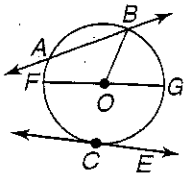
Chapter 10 Test, Form 1

SCORE _____ 35

Write the letter for the correct answer in the blank at the right of each question.

For Questions 1–3, use $\odot O$.

1. Name a diameter.



A. $\overline{FG}$ B. $\overline{AB}$ C. $\overline{AB}$ D. $\overline{CE}$ 1. A

2. Name a chord.

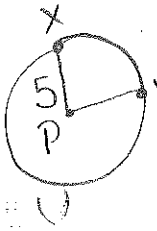
A. $\overline{FO}$ B. $\overline{AB}$ C. $\overline{AB}$ D. $\overline{CE}$ 2. B

3. Name a secant.

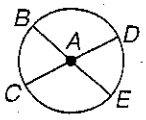
A. $\overline{FO}$ B. $\overline{AB}$ C. $\overline{AB}$ D. $\overline{CE}$ 3. C

4. If the diameter of a circle is 10 inches, find the circumference to the nearest hundredth.

A. 15.71 in. B. 31.42 in. C. 62.83 in. D. 314.16 in. 4. B



5. If $m\angle BAD = 110$ in $\odot A$, find $m\overset{\frown}{DE}$.



A. 35 B. 55 C. 70 D. 110 5. C

6. Points X and Y lie on $\odot P$ so that $PX = 5$ meters and $m\angle XPY = 90$. Find the length of $\overset{\frown}{XY}$ to the nearest hundredth. $90/360 \cdot 2\pi 5$

A. 3.93 m B. 7.85 m C. 15.71 m D. 19.63 m 6. B

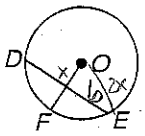
7. Chords $\overline{XY}$ and $\overline{WV}$ are equidistant from the center of $\odot O$. If $XY = 2x + 30$ and $WV = 5x - 12$, find x.

A. 58 B. 28 C. 14 D. 6 7. C

$2x + 30 = 5x - 12$

$42 = 3x$

8. Find the radius of $\odot O$ if $DE = 12$ inches and $\overline{DE}$ bisects $\overline{OF}$.



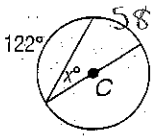
A. $2\sqrt{3}$ in. B. 6 in. C. 8 in. D. $4\sqrt{3}$ in. 8. D EC

$x^2 + 6^2 = 4x^2$

$36 = 3x^2$

$12 = x^2$

9. Find x.

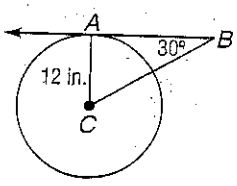


A. 122 B. 61 C. 58 D. 29 9. D

10. $EFGH$ is a quadrilateral inscribed in $\odot P$ with $m\angle E = 72$ and $m\angle F = 49$. Find $m\angle H$.

A. 131 B. 108 C. 90 D. 57 10. A

11. If $\overline{AB}$ is tangent to $\odot C$ at A, find BC.



A. 6 in. B. $4\sqrt{3}$ in. C. $12\sqrt{3}$ in. D. 24 in. 11. D

Assessments

NAME _____ DATE _____ PERIOD _____

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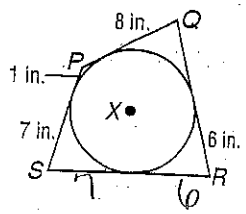
Chapter 10 Test, Form 1 *(continued)*

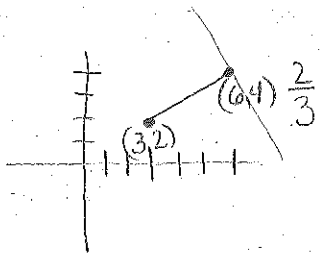
12. $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, and $\overline{SP}$ are tangent to $\odot X$. Find RS. **12.** C

A. 9 in. **B.** 12 in.
C. 13 in. **D.** cannot tell



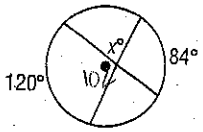
13. $\odot A$ has its center at $A(3, 2)$, and $\overline{CB}$ is tangent to $\odot A$ at $B(6, 4)$. Find the slope of $\overline{CB}$. **13.** C

A. 1 **B.** $\frac{1}{2}$ **C.** $-\frac{3}{2}$ **D.** $-\frac{1}{2}$



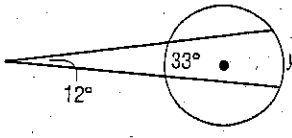
14. Find x. **14.** A

A. 78 **B.** 90
C. 102 **D.** 156



15. Find y. **15.** B

A. 66 **B.** 57
C. 45 **D.** 21

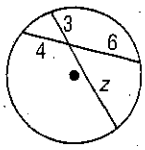


$\frac{y-33}{2} = 12$

$y - 33 = 24$

16. Find z. **16.** D

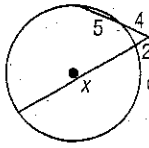
A. 2 **B.** 4.5
C. 7 **D.** 8



$3z = 24$

17. Find x. **17.** B

A. 4 **B.** 16
C. 22 **D.** 32



$9 \cdot 4 = 2(x+2)$

$36 = 2x + 4$

$32 = 2x$

$16 = x$

18. Find the center of the circle whose equation is $(x + 11)^2 + (y - 7)^2 = 121$. **18.** A

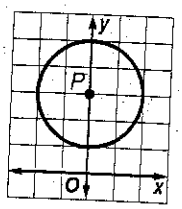
A. $(-11, 7)$ **B.** $(11, -7)$ **C.** $(121, 49)$ **D.** 11

19. Find the equation of a circle whose center is at $(2, 3)$ and radius is 6. **19.** D

A. $(x + 2)^2 + (y + 3)^2 = 6$ **B.** $(x - 2)^2 + (y - 3)^2 = 6$
C. $(x + 2)^2 + (y + 3)^2 = 36$ **D.** $(x - 2)^2 + (y - 3)^2 = 36$

20. Find the equation of $\odot P$. **20.** A

A. $x^2 + (y - 3)^2 = 4$ **B.** $x^2 + (y - 3)^2 = 2$
C. $(x - 3)^2 + y^2 = 2$ **D.** $(x - 3)^2 + y^2 = 4$



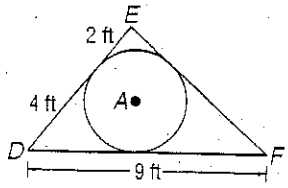
NAME _____ DATE _____ PERIOD _____

10

Chapter 10 Test, Form 1 *(continued)*

21. If $\overline{DE}$, $\overline{EF}$, and $\overline{FD}$ are tangent to $\odot A$, find EF.

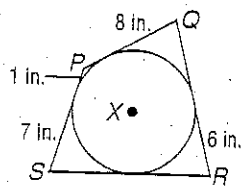
A. 9 ft **B.** 8 ft
C. 7 ft **D.** 6 ft



21. C

22. $\overline{PQ}$, $\overline{QR}$, $\overline{RS}$, and $\overline{SP}$ are tangent to $\odot X$. Find RS.

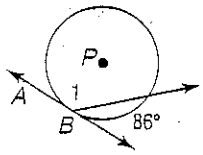
A. 9 in. **B.** 12 in.
C. 13 in. **D.** cannot tell



22. C

23. If $\overline{AB}$ is tangent to $\odot P$ at B, find $m\angle 1$.

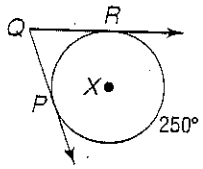
A. 43 **B.** 86
C. 137 **D.** 274



23. C

24. Find $m\angle PQR$ if $\overline{QP}$ and $\overline{QR}$ are tangent to $\odot X$.

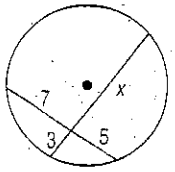
A. 70 **B.** 110
C. 125 **D.** 140



24. A

25. Find x.

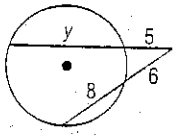
A. $\frac{15}{7}$ **B.** 5
C. 9 **D.** $\frac{35}{3}$



25. D

26. Find y.

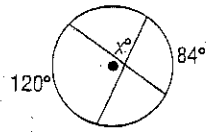
A. 7 **B.** $\frac{48}{5}$
C. $\frac{59}{5}$ **D.** $\frac{288}{25}$



26. C

27. Find x.

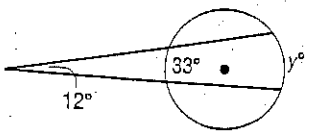
A. 78 **B.** 90
C. 102 **D.** 156



27. A

28. Find y.

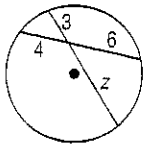
A. 66 **B.** 57
C. 45 **D.** 21



28. B

29. Find z.

A. 2 **B.** 4.5
C. 7 **D.** 8



29. D

NAME _____ DATE _____ PERIOD _____

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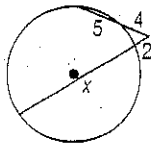
Chapter 10 Test, Form 1 *(continued)*

30. Find x.

A. 4 B. 16 C. 22 D. 32



30. B

31. Find the center of the circle whose equation is $(x + 11)^2 + (y - 7)^2 = 121$.

A. $(-11, 7)$ B. $(11, -7)$ C. $(121, 49)$ D. 11

31. A

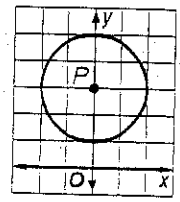
32. Find the equation of a circle whose center is at (2, 3) and radius is 6.

A. $(x + 2)^2 + (y + 3)^2 = 6$ B. $(x - 2)^2 + (y - 3)^2 = 6$
C. $(x + 2)^2 + (y + 3)^2 = 36$ D. $(x - 2)^2 + (y - 3)^2 = 36$

32. D

33. Find the equation of $\odot P$.

A. $x^2 + (y - 3)^2 = 4$ B. $x^2 + (y - 3)^2 = 2$
C. $(x - 3)^2 + y^2 = 2$ D. $(x - 3)^2 + y^2 = 4$



33. A

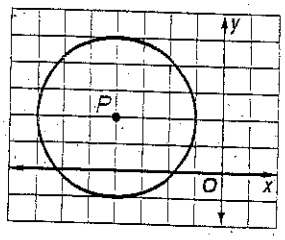
34. Find the equation of a circle whose center is at $(-1, 5)$ and radius is 8.

A. $(x - 1)^2 + (y + 5)^2 = 8$ B. $(x - 1)^2 + (y + 5)^2 = 64$
C. $(x + 1)^2 + (y - 5)^2 = 8$ D. $(x + 1)^2 + (y - 5)^2 = 64$

34. D

35. Find the equation of $\odot P$.

A. $(x + 4)^2 + (y - 2)^2 = 3$
B. $(x + 4)^2 + (y - 2)^2 = 9$
C. $(x - 4)^2 + (y + 2)^2 = 3$
D. $(x - 4)^2 + (y + 2)^2 = 9$



35. B

Extra Credit

(1) $\odot A$ has its center at $A(3, 2)$, and $\overline{CB}$ is tangent to $\odot A$ at $B(6, 4)$. Find the slope of $\overline{CB}$. Show Work!

A. 1 B. $\frac{1}{2}$ C. $-\frac{3}{2}$ D. $-\frac{1}{2}$

(2) a. Explain the difference between the length of an arc and the measure of an arc.

(2) b. Is it possible for two arcs to have the same measure but not the same length? Explain your answer.

NAME _____ DATE _____ PERIOD _____

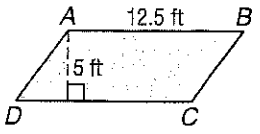
11 Chapter 11 Test, Form 1

SCORE _____

Assessments

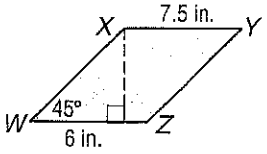
Write the letter for the correct answer in the blank at the right of each question.

1. Find the area of parallelogram $ABCD$ to the nearest tenth. 1. _____



A. 17.5 ft^2 **B.** 31.25 ft^2
C. 35 ft^2 **D.** 62.5 ft^2

2. Find the area of parallelogram $WXYZ$ to the nearest tenth. 2. _____

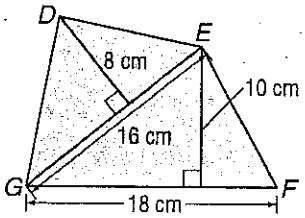


A. 27 in^2 **B.** 45 in^2
C. 63.6 in^2 **D.** 81 in^2

3. What is the best classification of quadrilateral $PQRS$ with vertices $P(2, 2)$, $Q(-1, 2)$, $R(-1, -3)$, and $S(2, -3)$? 3. _____

A. square **B.** rectangle
C. parallelogram **D.** none of these

4. Find the area of quadrilateral $DEFG$. 4. _____



A. 154 cm^2 **B.** 218 cm^2
C. 244 cm^2 **D.** 308 cm^2

5. Find the area of trapezoid $ABCD$ with vertices $A(1, -2)$, $B(5, -2)$, $C(4, 4)$, and $D(1, 4)$. Draw a picture to help. 5. _____

A. 6.5 units^2 **B.** 14 units^2
C. 21 units^2 **D.** 36 units^2

6. Find the area of rhombus $ABCD$ with vertices $A(-1, 3)$, $B(3, 0)$, $C(-1, -3)$, and $D(-5, 0)$. Draw a picture to help. 6. _____

A. 8 units^2 **B.** 24 units^2
C. 26 units^2 **D.** 32 units^2

7. Find the area of a regular octagon with a perimeter of 96 centimeters. 7. _____

A. about 695.3 cm^2 **B.** about 576 cm^2 Use tangent to find the apothem.
C. about 288 cm^2 **D.** about 119.3 cm^2

8. Find the area of an equilateral triangle with a side length of 14 inches. 8. _____

A. about 12.1 in^2 **B.** about 42 in^2 Draw a picture then use 30-60-90 rules to find the height.
C. about 84.9 in^2 **D.** about 254.6 in^2

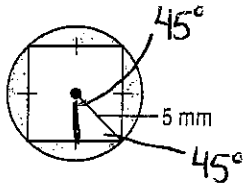
9. Find the area of a circle with a circumference of 20π. 9. _____

A. 400π **B.** 314π
C. 200π **D.** 100π

10. Find the area of the shaded region to the nearest tenth.

A. 28.5 mm^2 **B.** 53.5 mm^2

C. 66.3 mm^2 **D.** 72.3 mm^2

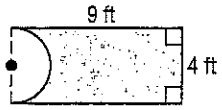


10. _____

11. Find the area of the figure to the nearest tenth.

A. 23.4 ft^2 **B.** 28.3 ft^2

C. 29.7 ft^2 **D.** 36 ft^2



11. _____

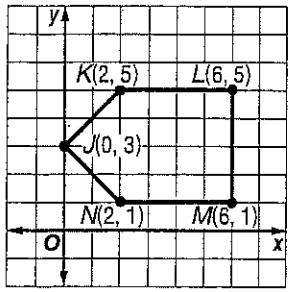
12. Find the area of the figure.

A. 22 $units^2$

B. 20 $units^2$

C. 18 $units^2$

D. 16 $units^2$



12. _____

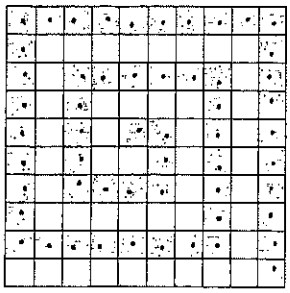
13. Find the probability that a point on the grid selected at random lies in the shaded region.

A. 0.46

B. 0.50

C. 0.55

D. 0.85

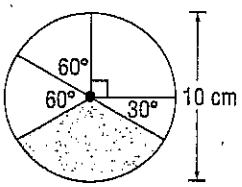


13. _____

14. Find the probability that a point selected at random lies in the shaded sector.

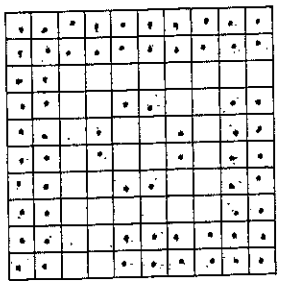
A. 0.50 **B.** 0.33

C. 0.17 **D.** 0.08



14. _____

15. A children's game is won by tossing a coin so that it lands on the white part of this board. If one coin is tossed, what is the probability of winning?

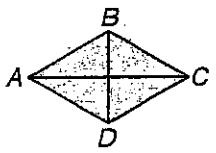


15. _____

16. Rhombus *ABCD* has an area of 264 square units. If $DB = 12$ units, find AC.

A. 44 units **B.** 22 units

C. 18 units **D.** 12 units



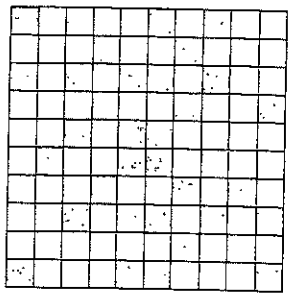
16. _____

17. Find the area of a regular hexagon with side length of 10 centimeters. Round to the nearest tenth. Use 30-60-90 triangle rules to find the apothem. 17. ____

A. 129.9 cm^2 **B.** 150 cm^2

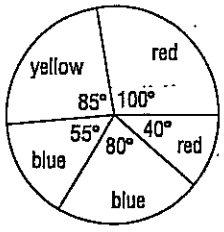
C. 259.8 cm^2 **D.** 519.6 cm^2

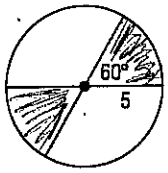
18. Find the probability that a point selected at random lies in the shaded region. 18. D



A. about 0.92 **B.** about 0.75

C. about 0.55 **D.** about 0.46





19. Find the probability of the spinner landing on red.

20. What is the area of the red sector if the radius is 9cm?

21. Find the probability of the spinner landing on blue.

22. What is the area of the blue sector if the radius is 9cm?

23. Find the probability of the spinner landing the shaded region.

24. What is the area of the shaded regions.

24. Match each area formula from the first column with the corresponding polygon in the second column.

a.	$A = \ell w$	**i.** triangle
b.	$A = \frac{1}{2}d_1d_2$	**ii.** parallelogram
c.	$A = s^2$	**iii.** trapezoid
d.	$A = \frac{1}{2}h(b_1 + b_2)$	**iv.** rhombus
e.	$A = \frac{1}{2}bh$	**v.** square
f.	$A = bh$	**vi.** rectangle

NAME Key DATE _____ PERIOD _____

11

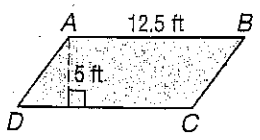
Chapter 11 Test, Form 1

SCORE 25

Assessments

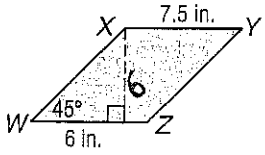
Write the letter for the correct answer in the blank at the right of each question.

1. Find the area of parallelogram $ABCD$ to the nearest tenth. 1. D



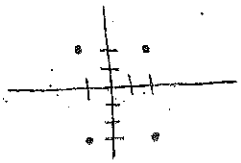
A. 17.5 ft^2 **B.** 31.25 ft^2
C. 35 ft^2 **D.** 62.5 ft^2

2. Find the area of parallelogram $WXYZ$ to the nearest tenth. 2. B



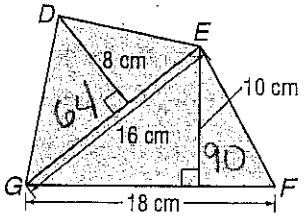
A. 27 in^2 **B.** 45 in^2
C. 63.6 in^2 **D.** 81 in^2

3. What is the best classification of quadrilateral $PQRS$ with vertices $P(2, 2)$, $Q(-1, 2)$, $R(-1, -3)$, and $S(2, -3)$? 3. B



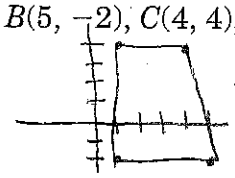
A. square **B.** rectangle
C. parallelogram **D.** none of these

4. Find the area of quadrilateral $DEFG$. 4. A



A. 154 cm^2 **B.** 218 cm^2
C. 244 cm^2 **D.** 308 cm^2

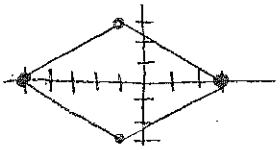
5. Find the area of trapezoid $ABCD$ with vertices $A(1, -2)$, $B(5, -2)$, $C(4, 4)$, and $D(1, 4)$. 5. C



$\frac{1}{2} \cdot 6(3+4)$

A. 6.5 units^2 **B.** 14 units^2
C. 21 units^2 **D.** 36 units^2

6. Find the area of rhombus $ABCD$ with vertices $A(-1, 3)$, $B(3, 0)$, $C(-1, -3)$, and $D(-5, 0)$. 6. B



$\frac{1}{2} \cdot 6 \cdot 8$

A. 8 units^2 **B.** 24 units^2
C. 26 units^2 **D.** 32 units^2

7. Find the area of a regular octagon with a perimeter of 96 centimeters. 7. A

$\tan 22.5 = \frac{6}{x}$

$\frac{1}{2}(96)(14.5)$

A. about 695.3 cm^2 **B.** about 576 cm^2
C. about 288 cm^2 **D.** about 119.3 cm^2

8. Find the area of an equilateral triangle with a side length of 14 inches. 8. C

A. about 12.1 in^2 **B.** about 42 in^2
C. about 84.9 in^2 **D.** about 254.6 in^2

9. Find the area of a circle with a circumference of 20π. 9. D

$d = 20$
$r = 10$

A. 400π **B.** 314π
C. 200π **D.** 100π

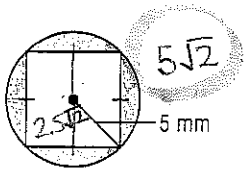
Chapter 11 Test, Form 1 *(continued)*

10. Find the area of the shaded region to the nearest tenth.

A. 28.5 mm^2 **B.** 53.5 mm^2

C. 66.3 mm^2 **D.** 72.3 mm^2

$\pi 5^2 - (5\sqrt{2})^2$



10. A

11. Find the area of the figure to the nearest tenth.

A. 23.4 ft^2 **B.** 28.3 ft^2

C. 29.7 ft^2 **D.** 36 ft^2

$36 - \frac{1}{2}\pi 2^2$

11. C

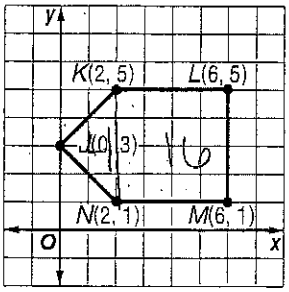
12. Find the area of the figure.

A. 22 units^2

B. 20 units^2

C. 18 units^2

D. 16 units^2



12. B

13. Find the probability that a point on the grid selected at random lies in the shaded region.

A. 0.46

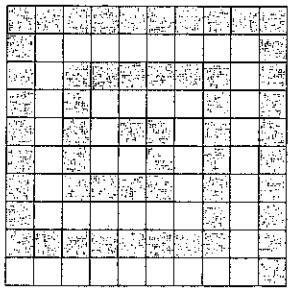
B. 0.50

C. 0.55

D. 0.85

$\frac{55}{100}$

$\begin{array}{r} 27 \\ 28 \\ \hline 55 \end{array}$

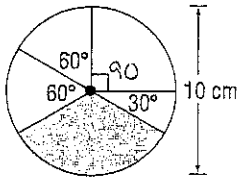


13. C

14. Find the probability that a point selected at random lies in the shaded sector.

A. 0.50 **B.** 0.33

C. 0.17 **D.** 0.08



14. B

15. Find the area of the shaded segments.

A. about 15.3 units^2

B. about 7.6 units^2

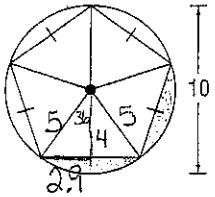
C. about 3.8 units^2

D. about 3.1 units^2

Area of $\Delta = 11.9$

$\frac{72}{360} \cdot \pi 5^2 - (2.9)4$

$15.7 - 11.6$

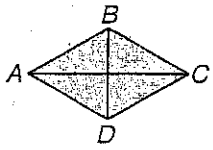


15. B

16. Rhombus $ABCD$ has an area of 264 square units. If $DB = 12$ units, find AC.

A. 44 units **B.** 22 units

C. 18 units **D.** 12 units



16. A

7. Find the area of a regular hexagon with side length of 10 centimeters. Round to the nearest tenth. apothem $= 5\sqrt{3}$ 17. C

A. 129.9 cm^2 **B.** 150 cm^2

C. 259.8 cm^2 **D.** 519.6 cm^2

18. Find the area of a nonagon with a perimeter of 126 inches. Round to the nearest tenth. apothem = 19.23 18. B

A. 1289.4 in^2 **B.** 1211.6 in^2

C. 466.2 in^2 **D.** 157.5 in^2

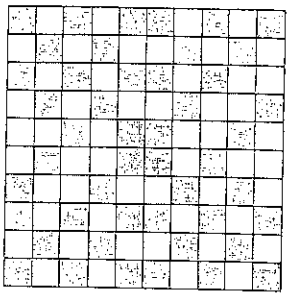
$\tan 20 = \frac{7}{x}$

$x = \frac{7}{\tan 20}$

19. Find the probability that a point selected at random lies in the shaded region. 19. D

A. about 0.92 **B.** about 0.75

C. about 0.55 **D.** about 0.46



$\frac{46}{100}$

Match each area formula from the first column with the corresponding polygon in the second column.

vi	20. $A = \ell w$	**i.** triangle
iv	21. $A = \frac{1}{2}d_1d_2$	**ii.** parallelogram
v	22. $A = s^2$	**iii.** trapezoid
iii	23. $A = \frac{1}{2}h(b_1 + b_2)$	**iv.** rhombus
i	24. $A = \frac{1}{2}bh$	**v.** square
ii	25. $A = bh$	**vi.** rectangle

NAME _____ DATE _____ PERIOD _____

12

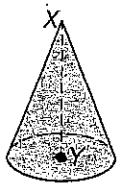
Chapter 12 Test, Form 2A

SCORE _____

Write the letter for the correct answer in the blank at the right of each question.

1. What do the dark segments represent in an orthogonal drawing? 1. D
   A. a change in color **B.** where paper should be folded
   C. a design on the surface **D.** a break in the surface

For Questions 2 and 3, use the figure.

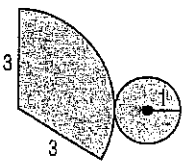


2. Identify the figure. 2. C
   A. pyramid **B.** prism
   C. cone **D.** cylinder

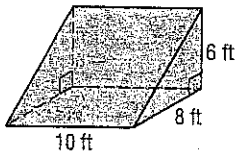
3. Name the base. 3. D
   A. X **B.** Y **C.** $\overline{XY}$ **D.** $\odot Y$

4. What name is given to a prism having five faces? 4. C
   A. pentagonal prism **B.** square prism
   C. triangular prism **D.** none of these

5. This net could be folded into a ___?___. 5. A
   A. cone **B.** cylinder
   C. sphere **D.** triangular prism



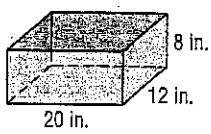
6. Find the surface area of the solid. 6. C
   A. 188 ft^2 **B.** 240 ft^2
   C. 288 ft^2 **D.** 480 ft^2



7. The lateral area of a cube is 36 square inches. How long is each edge? 7. B
   A. $\sqrt{6}$ in. **B.** 3 in. **C.** 6 in. **D.** 9 in.

8. The lateral area of a prism is 56 square inches and the area of each base is 17 square inches. Find the surface area of the prism. 8. B
   A. 952 in^2 **B.** 90 in^2 **C.** 73 in^2 **D.** 22 in^2

9. Find the surface area of the outside of the open box. 9. C
   A. 1920 in^2 **B.** 998 in^2
   C. 752 in^2 **D.** 400 in^2



10. The surface area of a right cylinder is 200π square centimeters and the radius is 4 centimeters. Find the height. 10. D
    A. 42 cm **B.** 25 cm **C.** 23 cm **D.** 21 cm

Assessments

NAME _____ DATE _____ PERIOD _____

12

Chapter 12 Test, Form 2A *(continued)*

For Questions 11 and 12, use a right cylinder with a radius of 3 inches and a height of 17 inches. Round to the nearest tenth.

11. Find the lateral area. 11. A

A. 320.4 in^2 **B.** 348.7 in^2 **C.** 377.0 in^2 **D.** 537.2 in^2

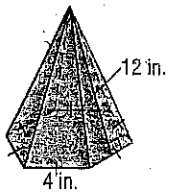
12. Find the surface area. 12. C

A. 320.4 in^2 **B.** 348.7 in^2 **C.** 377.0 in^2 **D.** 537.2 in^2

13. The lateral area of a regular pentagonal pyramid is 75 square inches and the slant height is 10 inches. Find the length of each side of the base. 13. D

A. 15 in. **B.** 14 in. **C.** 7.5 in. **D.** 3 in.

For Questions 14 and 15, use the figure.



14. Find the lateral area. 14. A

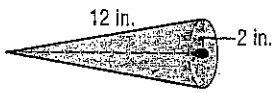
A. 144 cm^2 **B.** 144 + 24$\sqrt{3}$ cm^2

C. 196 cm^2 **D.** 288 cm^2

15. Find the surface area. 15. B

A. 144 cm^2 **B.** 144 + 24$\sqrt{3}$ cm^2 **C.** 196 cm^2 **D.** 288 cm^2

For Questions 16 and 17, use the figure. Round to the nearest tenth.



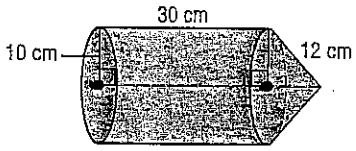
16. Find the lateral area. 16. B

A. 44.0 in^2 **B.** 75.4 in^2 **C.** 88.0 in^2 **D.** 100.5 in^2

17. Find the surface area. 17. C

A. 44.0 in^2 **B.** 75.4 in^2 **C.** 88.0 in^2 **D.** 100.5 in^2

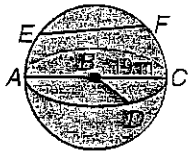
18. Find the surface area of this model rocket to the nearest tenth. 18. B



A. 2890.3 cm^2 **B.** 2576.1 cm^2

C. 2513.3 cm^2 **D.** 2261.9 cm^2

For Questions 19 and 20, use the figure.



19. Identify a chord. 19. A

A. $\overline{EF}$ **B.** $\odot B$ **C.** $\overline{BD}$ **D.** $\overset{\frown}{AD}$

20. Find the surface area to the nearest tenth. 20. A

A. 4536.5 m^2 **B.** 2268.2 m^2 **C.** 477.5 m^2 **D.** 238.8 m^2

bases	hemisphere		
cone		perspective view Platonic Solids	right cone right cylinder
cylinder		prism pyramid	slant height sphere surface area

Choose from the terms above to complete each sentence.

21. The height of each lateral face of a regular pyramid is called a(n) ___?___. 21. Slant height

22. A(n) ___?___ has a circular base and a vertex. 22. cone

23. A(n) ___?___ is a set of points in space that are a given distance from a given point. 23. sphere

24. The view of a solid figure from the corner is called a corner view or ___?___. 24. perspective view

25. The five types of regular polyhedra are called the ___?___. 25. platonic solids

26. A(n) ___?___ is a polyhedron with two parallel congruent faces called bases. 26. prism

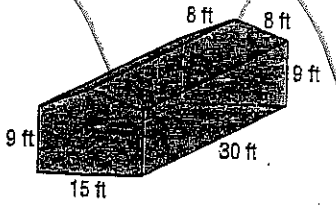
27. A polyhedron that has all but one face intersecting at one point is a(n) ___?___. 27. pyramid

28. The ___?___ is the sum of the areas of all the faces of the solid. 28. Surface Area

29. If the axis of a cylinder is also the altitude, then the cylinder is called a(n) ___?___. 29. right cylinder

30. A sphere is separated by a great circle into two congruent halves, each called a(n) ___?___. 30. hemisphere

Bonus Find the amount of glass needed to cover the sides of the greenhouse shown. The bottom, front, and back are not glass.



B: _____

NAME _____ DATE _____ PERIOD _____

12

Chapter 12 Test, Form 2A

SCORE _____

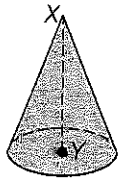
Write the letter for the correct answer in the blank at the right of each question.

1. What do the dark segments represent in an orthogonal drawing? 1. _____

A. a change in color **B.** where paper should be folded

C. a design on the surface **D.** a break in the surface

For Questions 2 and 3, use the figure.



2. Identify the figure. 2. _____

A. pyramid **B.** prism

C. cone **D.** cylinder

3. Name the base. 3. _____

A. X **B.** Y **C.** $\overline{XY}$ **D.** $\odot Y$

4. What name is given to a prism having five faces? 4. _____

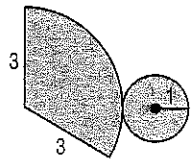
A. pentagonal prism **B.** square prism

C. triangular prism **D.** none of these

5. This net could be folded into a ___?___. 5. _____

A. cone **B.** cylinder

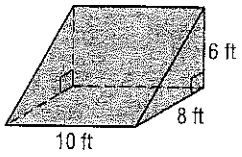
C. sphere **D.** triangular prism



6. Find the surface area of the solid. 6. _____

A. 188 ft^2 **B.** 240 ft^2

C. 288 ft^2 **D.** 480 ft^2



7. The lateral area of a cube is 36 square inches. How long is each edge? 7. _____

A. $\sqrt{6}$ in. **B.** 3 in. **C.** 6 in. **D.** 9 in.

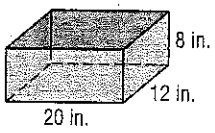
8. The lateral area of a prism is 56 square inches and the area of each base is 17 square inches. Find the surface area of the prism. 8. _____

A. 952 in^2 **B.** 90 in^2 **C.** 73 in^2 **D.** 22 in^2

9. Find the surface area of the outside of the open box. 9. _____

A. 1920 in^2 **B.** 998 in^2

C. 752 in^2 **D.** 400 in^2



10. The surface area of a right cylinder is 200π square centimeters and the radius is 4 centimeters. Find the height. 10. _____

A. 42 cm **B.** 25 cm **C.** 23 cm **D.** 21 cm

Assessments

NAME _____ DATE _____ PERIOD _____

12

Chapter 12 Test, Form 2A *(continued)*

For Questions 11 and 12, use a right cylinder with a radius of 3 inches and a height of 17 inches. Round to the nearest tenth.

11. Find the lateral area. **11.** _____

A. 320.4 in^2 **B.** 348.7 in^2 **C.** 377.0 in^2 **D.** 537.2 in^2

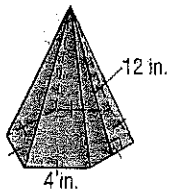
12. Find the surface area. **12.** _____

A. 320.4 in^2 **B.** 348.7 in^2 **C.** 377.0 in^2 **D.** 537.2 in^2

13. The lateral area of a regular pentagonal pyramid is 75 square inches and the slant height is 10 inches. Find the length of each side of the base. **13.** _____

A. 15 in. **B.** 14 in. **C.** 7.5 in. **D.** 3 in.

For Questions 14 and 15, use the figure.



14. Find the lateral area. **14.** _____

A. 144 cm^2 **B.** $144 + 24\sqrt{3}$ cm^2

C. 196 cm^2 **D.** 288 cm^2

15. Find the surface area. **15.** _____

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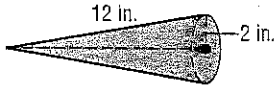


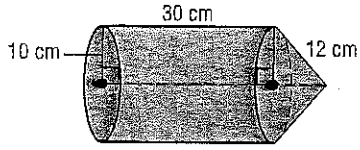
16. Find the lateral area. **16.** _____

A. 44.0 in^2 **B.** 75.4 in^2 **C.** 88.0 in^2 **D.** 100.5 in^2

17. Find the surface area. **17.** _____

A. 44.0 in^2 **B.** 75.4 in^2 **C.** 88.0 in^2 **D.** 100.5 in^2

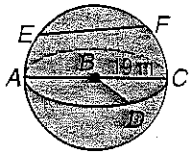
18. Find the surface area of this model rocket to the nearest tenth. **18.** _____



A. 2890.3 cm^2 **B.** 2576.1 cm^2

C. 2513.3 cm^2 **D.** 2261.9 cm^2

For Questions 19 and 20, use the figure.



19. Identify a chord. **19.** _____

A. $\overline{EF}$ **B.** $\odot B$ **C.** $\overline{BD}$ **D.** $\overset{\frown}{AD}$

20. Find the surface area to the nearest tenth. **20.** _____

A. 4536.5 m^2 **B.** 2268.2 m^2 **C.** 477.5 m^2 **D.** 238.8 m^2

bases	hemisphere		
cone		perspective view Platonic Solids	right cone right cylinder
cylinder		prism pyramid	slant height sphere surface area

Choose from the terms above to complete each sentence.

a 1. The height of each lateral face of a regular pyramid is called a(n) ___?___. 21. _____

2 2. A(n) ___?___ has a circular base and a vertex. 22. _____

23. A(n) ___?___ is a set of points in space that are a given distance from a given point. 23. _____

24. The view of a solid figure from the corner is called a corner view or ___?___. 24. _____

25. The five types of regular polyhedra are called the ___?___. 25. _____

26. A(n) ___?___ is a polyhedron with two parallel congruent faces called bases. 26. _____

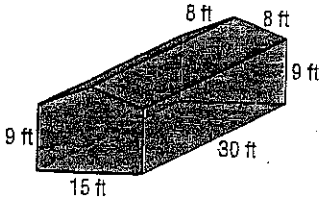
27. A polyhedron that has all but one face intersecting at one point is a(n) ___?___. 27. _____

28. The ___?___ is the sum of the areas of all the faces of the solid. 28. _____

29. If the axis of a cylinder is also the altitude, then the cylinder is called a(n) ___?___. 29. _____

∃0. A sphere is separated by a great circle into two congruent halves, each called a(n) ___?___. 30. _____

Bonus Find the amount of glass needed to cover the sides of the greenhouse shown. The bottom, front, and back are not glass.



B: _____

Name _____ Date _____ Score _____

13 Chapter 13 Test

Write the letter for the correct answer in the blank at the right of each question.

1. How many cubic feet are in one cubic yard? 1. _____
   A. 3 **B.** 9 **C.** 27 **D.** 81

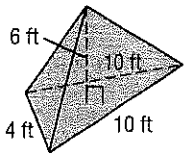
2. The surface area of a cube is 96 square feet. Find the volume. 2. _____
   A. 4 ft^3 **B.** 16 ft^3 **C.** 64 ft^3 **D.** 256 ft^3

3. A cylinder whose height is 5 meters has a volume of 320π cubic meters. Find the radius of the cylinder. 3. _____
   A. 8 m **B.** 12.8 m **C.** 64 m **D.** 201 m

4. A cylinder has a 10-inch diameter and an 11-inch height. Find the volume to the nearest tenth. 4. _____
   A. 172.8 in^3 **B.** 345.6 in^3 **C.** 863.9 in^3 **D.** 3455.8 in^3

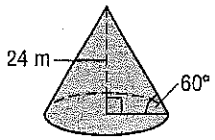
5. A square pyramid has a height that is 8 centimeters long and a base with sides that are each 9 centimeters long. Find the volume. 5. _____
   A. 648 cm^3 **B.** 324 cm^3 **C.** 216 cm^3 **D.** 162 cm^3

6. Find the volume to the nearest tenth. 6. _____
   A. 80.0 ft^3 **B.** 78.4 ft^3
   C. 48.0 ft^3 **D.** 39.2 ft^3



7. The volume of a cone is 1080π cubic centimeters and the radius is 18 centimeters. Find the height. 7. _____
   A. 5 cm **B.** 10 cm **C.** 20 cm **D.** 30 cm

8. Find the volume to the nearest tenth. 8. _____
   A. 3619.1 m^3 **B.** 4825.5 m^3
   C. 14,476.5 m^3 **D.** 43,429.4 m^3



9. A sphere has a 21-inch radius. Find the volume to the nearest tenth. 9. _____
   A. 38,792.4 in^3 **B.** 19,396.2 in^3 **C.** 5541.8 in^3 **D.** 1847.3 in^3

10. A sphere has a volume that is 972π cubic inches. Find the radius. 10. _____
    A. 2 in. **B.** 3 in. **C.** 6 in. **D.** 9 in.

11. A sphere has a 6-inch radius. A cone has a 12-inch height and base with a 6-inch radius. Compare their volumes. 11. _____
    A. The volume of the sphere is greater.
    B. The volume of the cone is greater.
    C. The volumes are equal.
    D. not enough information

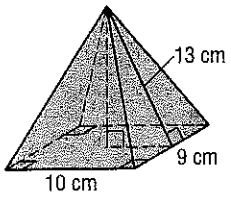
12. A golf ball has a 3.8-centimeter diameter and a tennis ball has a 7-centimeter diameter. Find the difference between their volumes to the nearest tenth. **12.** _____

A. 1206.9 cm^3 **B.** 220.5 cm^3 **C.** 150.9 cm^3 **D.** 17.2 cm^3

13. Find the volume of the pyramid. **13.** _____

A. 360 cm^3 **B.** 390 cm^3

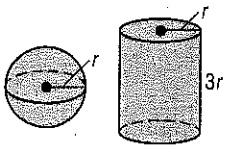
C. 1080 cm^3 **D.** 1170 cm^3



14. Which solid has the greater volume? **14.** _____

A. sphere **B.** cylinder

C. The volumes are equal. **D.** not enough information



15. Which of the following could be the units of measure for the volume of a solid? **15.** _____

A. cubic inches **B.** square inches **C.** inches **D.** cubic seconds

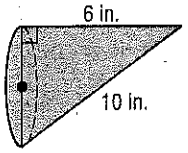
16. A cone and a cylinder have the same radius and the same height. The volume of the cone is what fraction of the volume of the cylinder? **16.** _____

A. $\frac{1}{2}$ **B.** $\frac{1}{3}$ **C.** $\frac{1}{4}$ **D.** $\frac{1}{8}$

17. Find the volume to the nearest tenth. **17.** _____

A. 1206.4 in^3 **B.** 402.1 in^3

C. 301.6 in^3 **D.** 100.5 in^3



18. Find the volume of a pyramid with a height of 10 inches and a base with an area of 21 square inches. **18.** _____

A. 210 in^3 **B.** 105 in^3 **C.** 70 in^3 **D.** 35 in^3

19. The area of the base of a prism is 96 square centimeters and the height is 9 centimeters. Find the volume. **19.** _____

A. 288 cm^3 **B.** 864 cm^3 **C.** 932 cm^3 **D.** 7776 cm^3

20. The volume of a cylinder is 62.8 cubic meters and the radius is 2 meters. Find the height to the nearest meter. **20.** _____

A. 20 m **B.** 10 m **C.** 8 m **D.** 5 m

21. A sphere has a radius that is 12 centimeters long. Find the volume to the nearest tenth. 21. _____

A. 7238.2 cm^3 **B.** 3619.1 cm^3 **C.** 1809.6 cm^3 **D.** 603.2 cm^3

22. A sphere has a volume that is 36π cubic meters. Find the radius of the sphere. 22. _____

A. 2 m **B.** 3 m **C.** 6 m **D.** 12 m

Determine whether each sentence is *true* or *false*. If false, replace the underlined word or formula to make a true sentence.

23. Congruent solids have the same shape but not the same size. 23. _____

24. Similar solids have the same shape and the same size. 24. _____

25. Volume is the measure of the amount of space that a figure encloses. 25. _____

26. $V = \pi r^2 h$ is the formula for the volume of a cone. 26. _____

27. $V = 4\pi r^2$ is the formula for the volume of a sphere. 27. _____

28. $V = Bh$ is the formula for the volume of a prism. 28. _____

29. $V = \frac{1}{3}Bh$ is the formula for the volume of a pyramid. 29. _____

30. $V = \frac{\pi r^2 h}{3}$ is the formula for the volume of a cylinder. 30. _____

Name Key Date _____ Score _____

13 Chapter 13 Test

35

Write the letter for the correct answer in the blank at the right of each question.

1. How many cubic feet are in one cubic yard? 1. C
   A. 3 **B.** 9 **C.** 27 **D.** 81

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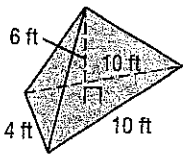

7. The volume of a cone is 1080π cubic centimeters and the radius is 18 centimeters. Find the height. 7. B
   A. 5 cm **B.** 10 cm **C.** 20 cm **D.** 30 cm

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   A. 3619.1 m^3 **B.** 4825.5 m^3
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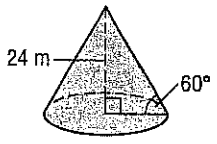

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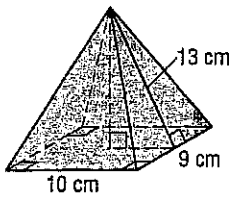

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A. sphere **B.** cylinder

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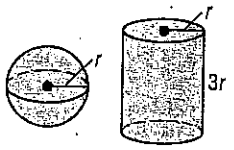

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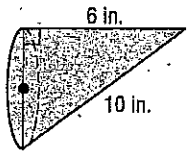

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A. 288 cm^3 **B.** 864 cm^3 **C.** 932 cm^3 **D.** 7776 cm^3

20. The volume of a cylinder is 62.8 cubic meters and the radius is 2 meters. Find the height to the nearest meter. 20. D

A. 20 m **B.** 10 m **C.** 8 m **D.** 5 m

21. A sphere has a radius that is 12 centimeters long. Find the volume to the nearest tenth. 21. A

A. 7238.2 cm^3 **B.** 3619.1 cm^3 **C.** 1809.6 cm^3 **D.** 603.2 cm^3

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24. Similar solids have the same shape and the same size. — 24. F, Congruent Solids

25. Volume is the measure of the amount of space that a figure encloses. — 25. True

26. $V = \pi r^2 h$ is the formula for the volume of a cone. — 26. F, $V = \frac{1}{3}\pi r^2 h$ or $V = \frac{1}{3}Bh$

27. $V = 4\pi r^2$ is the formula for the volume of a sphere. — 27. F, $V = \frac{4}{3}\pi r^3$

28. $V = Bh$ is the formula for the volume of a prism. — 28. True

29. $V = \frac{1}{3}Bh$ is the formula for the volume of a pyramid. — 29. True

30. $V = \frac{\pi r^2 h}{3}$ is the formula for the volume of a cylinder. — 30. F, $V = \pi r^2 h$ or $V = Bh$