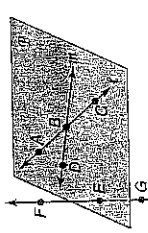


Chapter 1 Test, Form 1

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

1. Name the geometric shape modeled by a pinhole in a wall.
 A. line segment B. plane C. line D. point



2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

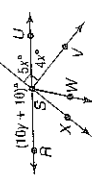
1 Chapter 1 Test, Form 1 (continued)

For Exercises 11-13, use the figure at the right.



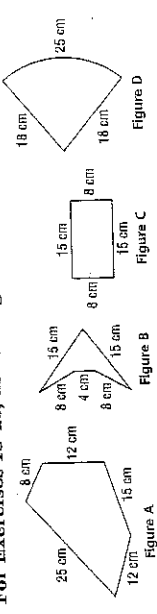
11. Which point is the vertex of all the angles in this figure?
 A. A B. B C. C D. D E. E F. F
12. What type of angle is $\angle ABC$?
 F. acute angle G. right angle H. obtuse angle J. straight angle
13. Which is true?
 A. $m\angle EBF = 140$ B. $m\angle EBF = 90$ C. $m\angle EBF = 50$ D. $m\angle EBF = 40$
14. The base of a prism has a perimeter of 12 cm and a height of 2 cm. The area of its base is 5 cm^2 . What is the surface area of the prism?
 F. 23 cm^2 G. 34 cm^2 H. 50.5 cm^2 J. 60 cm^2

For Exercises 15-17, use the figure at the right.



15. Which pair of angles are vertical angles?
 A. $\angle RST, \angle TSU$ B. $\angle RST, \angle TSU$ C. $\angle RST, \angle TSU$ D. $\angle RST, \angle TSU$
16. Which angle is supplementary to $\angle USV$?
 F. $\angle TSU$ G. $\angle VSW$ H. $\angle RST$ J. $\angle WSR$
17. Find x and y .
 A. $x = 10, y = 12$ B. $x = 20, y = 7$ C. $x = 10, y = 8$ D. $x = 50, y = 40$

For Exercises 18-20, use the figures below.



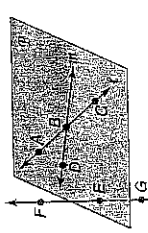
18. Which figure is not a polygon?
 F. Figure A G. Figure B H. Figure C J. Figure D
19. Find the perimeter of the convex pentagon.
 A. 46 cm B. 50 cm C. 61 cm D. 72 cm
20. Suppose the length and width of the rectangle are doubled. What is its perimeter?
 F. 120 cm G. 92 cm H. 76 cm J. 46 cm

Bonus Each side of a square is $2x - 6$ yards long. If the perimeter of the square is 72 yards what is the value of x ?
 B: _____

Assessment

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

1. Name the geometric shape modeled by a pinhole in a wall.
 A. line segment B. plane C. line D. point



2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

11. _____
12. _____
13. _____
14. _____
15. _____
16. _____
17. _____
18. _____
19. _____
20. _____

2

Chapter 2 Test, Form 1

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

1. Make a conjecture about the next term in this sequence: 92, 87, 82, 77, 72.
 - A. -5
 - B. 62
 - C. 87
 - D. 77
2. Make a conjecture given that M is the midpoint of \overline{BC} .
 - F. $BM = BC$
 - G. $BM = MC$
 - H. $MC = BC$
 - J. M bisects $\angle C$
3. Given: $a + b \leq 8$ and $a = 2$
Conjecture: $b \leq 5$
Which of the following would be a counterexample?
 - A. $b = 3$
 - B. $b = 5$
 - C. $b = 6$
 - D. $b = a$
4. If p is true and q is false, what is the truth value of p or q ?
 - F. true
 - G. false
 - H. 0
 - J. 1

For Exercises 5 and 6, use the truth table.

p	q	$\sim p$	$\sim p \vee q$
T	T		
T	F		
F	T		
F	F		

5. Which would be the values in the $\sim p$ column?
 - A. T F F T
 - C. T F F T
 - B. F F T T
 - D. T T F F
6. Which would be the values in the $\sim p \vee q$ column?
 - H. T T T T
 - F. F F T F
 - G. T T T F
 - J. T F T T
7. Identify the hypothesis of the statement *If $x + 4 = 5$, then $x = 1$.*
 - A. $x = 1$, then $x + 4 = 5$.
 - C. $x + 4 = 5$
 - B. $x + 4 \neq 5$, then $x \neq 1$.
 - D. $x = 1$.
8. Identify the converse of the statement *if cats fly, then ducks bark.*
 - F. If cats don't fly, then ducks don't bark.
 - G. If ducks don't bark, then cats don't fly.
 - H. If cats bark, then ducks fly.
 - J. If ducks bark, then cats fly.
9. Identify the inverse of the statement *If a triangle has 3 equal sides, then it is equilateral.*
 - A. If a triangle does not have 3 equal sides, then it is not equilateral.
 - B. If a triangle is equilateral, then it has 3 equal sides.
 - C. If a triangle is not equilateral, then it does not have 3 equal sides.
 - D. If a triangle has 2 equal sides, then it is isosceles.
10. Which of the following illustrates the Law of Detachment?
 - F. $\{(p \rightarrow q) \vee (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - H. $\{(p \rightarrow q) \wedge q\} \rightarrow p$
 - G. $\{(p \rightarrow q) \wedge (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - J. $\{(p \rightarrow q) \wedge p\} \rightarrow q$

2

Chapter 2 Test, Form 1 (continued)

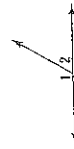
11. Which of the following illustrates the Law of Syllogism?
 - A. $\{(p \rightarrow q) \vee (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - C. $\{(p \rightarrow q) \wedge q\} \rightarrow p$
 - B. $\{(p \rightarrow q) \wedge (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - D. $\{(p \rightarrow q) \wedge p\} \rightarrow q$
12. Which best describes the statement *A plane contains at least 3 points not on the same line*?
 - F. always true
 - G. sometimes true
 - H. never true
 - J. cannot tell
13. Which is a type of proof where you write a paragraph to explain why a conjecture for a given situation is true?
 - A. argument
 - C. paragraph proof
 - B. explanation
 - D. two-column proof

For Exercises 14–16, choose the property that justifies the statement.

14. If $3x = 6$, then $x = 2$.
 - F. Addition
 - G. Subtraction
 - H. Square root
 - J. Division
15. If $m\angle A = 10$ and $m\angle B = 10$, then $m\angle A = m\angle B$.
 - A. Reflexive
 - B. Symmetric
 - C. Substitution
 - D. Equality
16. If $\overline{PS} \cong \overline{WX}$, then $PS = WX$.
 - F. Reflexive
 - H. Definition of congruent segments
 - G. Symmetric
 - J. Transitive
17. If A , B , and N are collinear and $AB + BN = AN$, which point is between the other two points?
 - A. A
 - B. B
 - C. N
 - D. cannot tell
18. Find x .
 - F. 25
 - H. 55
 - G. 35
 - J. 125
19. If $m\angle ABD = 56$, find $m\angle DBC$.
 - A. 124
 - C. 44
 - B. 56
 - D. 34
20. If a right angle is trisected, what is the measure of each of the smaller angles?
 - F. 30
 - G. 45
 - H. 60
 - J. 90



Bonus If $m\angle 1$ is twice $m\angle 2$, find $m\angle 1$.



2

Chapter 2 Test, Form 1

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

1. Make a conjecture about the next term in this sequence: 92, 87, 82, 77, 72.
 - A. -5
 - B. 62
 - C. 87
 - D. 77
2. Make a conjecture given that M is the midpoint of \overline{BC} .
 - F. $BM = BC$
 - G. $BM = MC$
 - H. $MC = BC$
 - J. M bisects $\angle C$
3. Given: $a + b \leq 8$ and $a = 2$
Conjecture: $b \leq 5$
Which of the following would be a counterexample?
 - A. $b = 3$
 - B. $b = 5$
 - C. $b = 6$
 - D. $b = a$
4. If p is true and q is false, what is the truth value of p or q ?
 - F. true
 - G. false
 - H. 0
 - J. 1

For Exercises 5 and 6, use the truth table.

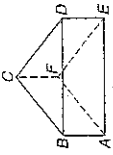
p	q	$\sim p$	$\sim p \vee q$
T	T		
T	F		
F	T		
F	F		

5. Which would be the values in the $\sim p$ column?
 - A. T F F T
 - C. T F F T
 - B. F F T T
 - D. T T F F
6. Which would be the values in the $\sim p \vee q$ column?
 - H. T T T T
 - F. F F T F
 - G. T T T F
 - J. T F T T
7. Identify the hypothesis of the statement *If $x + 4 = 5$, then $x = 1$.*
 - A. $x = 1$, then $x + 4 = 5$.
 - C. $x + 4 = 5$
 - B. $x + 4 \neq 5$, then $x \neq 1$.
 - D. $x = 1$.
8. Identify the converse of the statement *if cats fly, then ducks bark.*
 - F. If cats don't fly, then ducks don't bark.
 - G. If ducks don't bark, then cats don't fly.
 - H. If cats bark, then ducks fly.
 - J. If ducks bark, then cats fly.
9. Identify the inverse of the statement *If a triangle has 3 equal sides, then it is equilateral.*
 - A. If a triangle does not have 3 equal sides, then it is not equilateral.
 - B. If a triangle is equilateral, then it has 3 equal sides.
 - C. If a triangle is not equilateral, then it does not have 3 equal sides.
 - D. If a triangle has 2 equal sides, then it is isosceles.
10. Which of the following illustrates the Law of Detachment?
 - F. $\{(p \rightarrow q) \vee (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - H. $\{(p \rightarrow q) \wedge q\} \rightarrow p$
 - G. $\{(p \rightarrow q) \wedge (q \rightarrow r)\} \rightarrow (p \rightarrow r)$
 - J. $\{(p \rightarrow q) \wedge p\} \rightarrow q$

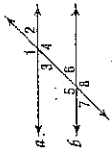
3 Chapter 3 Test, Form 1

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

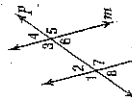
- For Questions 1-3, refer to the figure at the right.
1. Identify the plane parallel to plane BCD .
 A. plane ABE
 B. plane ABF
 C. plane $ADEF$
 D. plane $DEFG$
2. Identify a segment parallel to \overline{CD} .
 F. \overline{AB}
 G. \overline{AE}
 H. \overline{BC}
 J. \overline{EF}
3. Which segment is skew to \overline{DE} ?
 A. \overline{AB}
 B. \overline{BC}
 C. \overline{BD}
 D. \overline{CD}



- For Questions 4-7, refer to the figure at the right.
- Identify the special name for each angle pair.
4. $\angle 1$ and $\angle 8$
 F. alternate exterior
 G. alternate interior
 H. consecutive interior
 J. corresponding
5. $\angle 3$ and $\angle 7$
 A. alternate exterior
 B. alternate interior
 C. consecutive interior
 D. corresponding
6. Given $a \parallel b$ and $m\angle 2 = 65$, find $m\angle 6$.
 F. 25
 G. 65
 H. 115
 J. 140
7. Given $a \parallel b$ and $m\angle 3 = 5x + 10$ and $m\angle 5 = 3x + 10$, find x .
 A. 110
 B. 70
 C. 20
 D. 2.5



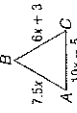
- For Questions 8-10, refer to the figure at the right.
8. Which angle relationship justifies that $\ell \parallel m$?
 F. $\angle 1 \cong \angle 7$
 G. $\angle 3 \cong \angle 4$
 H. $\angle 4 \cong \angle 5$
 J. $\angle 6 \cong \angle 8$
9. If $m\angle 2 = 6x + 8$ and $m\angle 6 = 8x - 6$, find x so that $\ell \parallel m$.
 A. -7
 B. 1
 C. 7
 D. 14
10. Given $m\angle 6 + m\angle 7 = 180$, which postulate or theorem justifies that $\ell \parallel m$?
 F. Consecutive Interior Angles Theorem
 G. Corresponding Angles Postulate
 H. Alternate Exterior Angles Theorem
 J. Alternate Interior Angles Theorem



4 Chapter 4 Test, Form 1

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

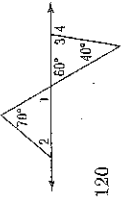
1. Which best describes the type of triangle?
 A. acute
 B. equiangular
 C. obtuse
 D. right
2. What is the value of x if $\triangle ABC$ is equilateral?
 F. -8
 G. $-\frac{1}{8}$
 H. $\frac{1}{2}$
 J. 2



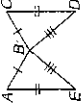
Use the figure for Questions 3 and 4 and write the letter for the correct answer in the blank at the right of each question.

3. What is $m\angle 2$?
 A. 50
 B. 70
 C. 110
 D. 120

4. What is $m\angle 4$?
 F. 10
 G. 60
 H. 100
 J. 120

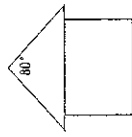


5. What are the congruent triangles in the diagram?
 A. $\triangle ABC \cong \triangle EBD$
 B. $\triangle ABE \cong \triangle CBD$
 C. $\triangle AEB \cong \triangle CBD$
 D. $\triangle ABE \cong \triangle CDB$
6. If $\triangle CJW \cong \triangle AGS$, $m\angle A = 50$, $m\angle J = 45$, and $m\angle S = 16x + 5$, what is x ?
 F. 17.5
 G. 11.875
 H. 6
 J. 5



7. The coordinates of $\triangle ABC$ are $A(1, 1)$, $B(0, 1)$, and $C(0, 0)$. The vertices of $\triangle A'B'C'$ are $A'(-1, 1)$, $B'(0, 1)$, and $C'(0, 0)$. Which transformation shows that the two triangles are congruent?
 A. Translation
 B. Rotation
 C. Reflection
 D. Slide

8. A triangular-shaped roof of a house has congruent legs. What is the measure of each of the two base angles?



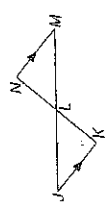
- F. 25
 G. 50
 H. 100
 J. 120

Assessment

Assessment

4 Chapter 4 Test, Form 1 (continued)

Use the proof for Questions 9 and 10 and write the letter for the correct answer in the blank at the right of each question.

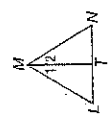


Given: L is the midpoint of \overline{JM} ; $\overline{JK} \parallel \overline{MN}$.
 Prove: $\triangle JKL \cong \triangle MNL$

Statements	Reasons
1. L is the midpoint of \overline{JM} .	1. Given
2. $\overline{JL} \cong \overline{ML}$	2. Definition of midpoint
3. $\overline{JK} \parallel \overline{MN}$	3. Given
4. $\angle JKL \cong \angle MNL$	4. Alt. int. \angle are \cong .
5. $\angle JLK \cong \angle MLN$	5. (Question 9)
6. $\triangle JKL \cong \triangle MNL$	6. (Question 10)

9. What is the reason for $\angle JLK \cong \angle MLN$?
- A. definition of midpoint
 - B. corresponding angles
 - C. vertical angles
 - D. alternate exterior angles

10. What is the reason for $\triangle JKL \cong \triangle MNL$?
- F. AAS
 - G. ASA
 - H. SAS
 - J. SSS

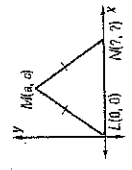


Use the figure for Questions 11 and 12 and write the letter for the correct answer in the blank at the right of each question.

11. If $\triangle LMN$ is isosceles and T is the midpoint of \overline{LN} , which postulate can be used to prove $\triangle MLT \cong \triangle MNT$?
- A. AAA
 - B. AAS
 - C. SAS
 - D. ABC

12. If $\triangle MLT \cong \triangle MNT$, what is used to prove $\angle 1 \cong \angle 2$?
- F. CPCTC
 - G. definition of isosceles triangle
 - H. definition of perpendicular
 - J. definition of angle bisector

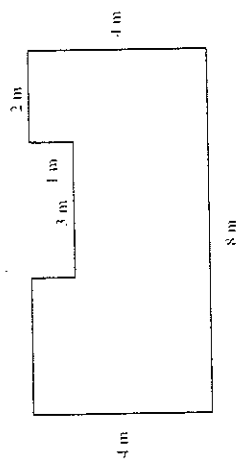
13. What are the missing coordinates of this triangle?
- A. $(2a, 2c)$
 - B. $(2a, 0)$
 - C. $(0, 2a)$
 - D. $(a, 2c)$



Bonus Classify the triangle with coordinates $A(5, 0)$, $B(0, 5)$, and $C(-5, 0)$.

Composite Figure Area Practice

Find the area and perimeter of the figure below.



Find the area of the shaded figures below.

