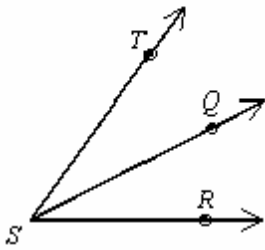
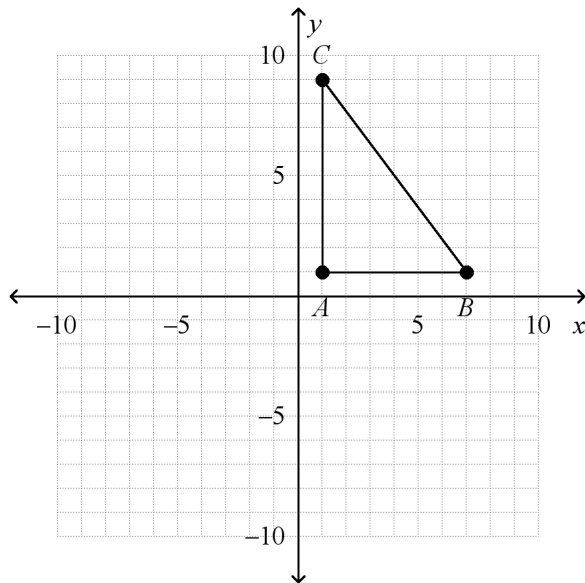


- _____ 5. \overrightarrow{SQ} bisects $\angle RST$, and $m\angle RSQ = 2x - 4$. Write an expression for $\angle RST$. The diagram is not to scale.

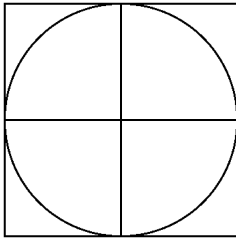


- A. $x - 2$ B. $4x - 4$ C. $2x - 4$ D. $4x - 8$
- _____ 6. Find the coordinates of the midpoint of the segment whose endpoints are $H(6, 4)$ and $K(2, 8)$.
 A. $(4, 4)$ B. $(2, 2)$ C. $(8, 12)$ D. $(4, 6)$
- _____ 7. Noam walks home from school by walking 8 blocks north and then 6 blocks east. How much shorter would his walk be if there were a direct path from the school to his house? Assume that the blocks are square.
 A. 14 blocks C. 4 blocks
 B. 10 blocks D. The distance would be the same.
- _____ 8. Find the perimeter of $\triangle ABC$ with vertices $A(1, 1)$, $B(7, 1)$, and $C(1, 9)$.

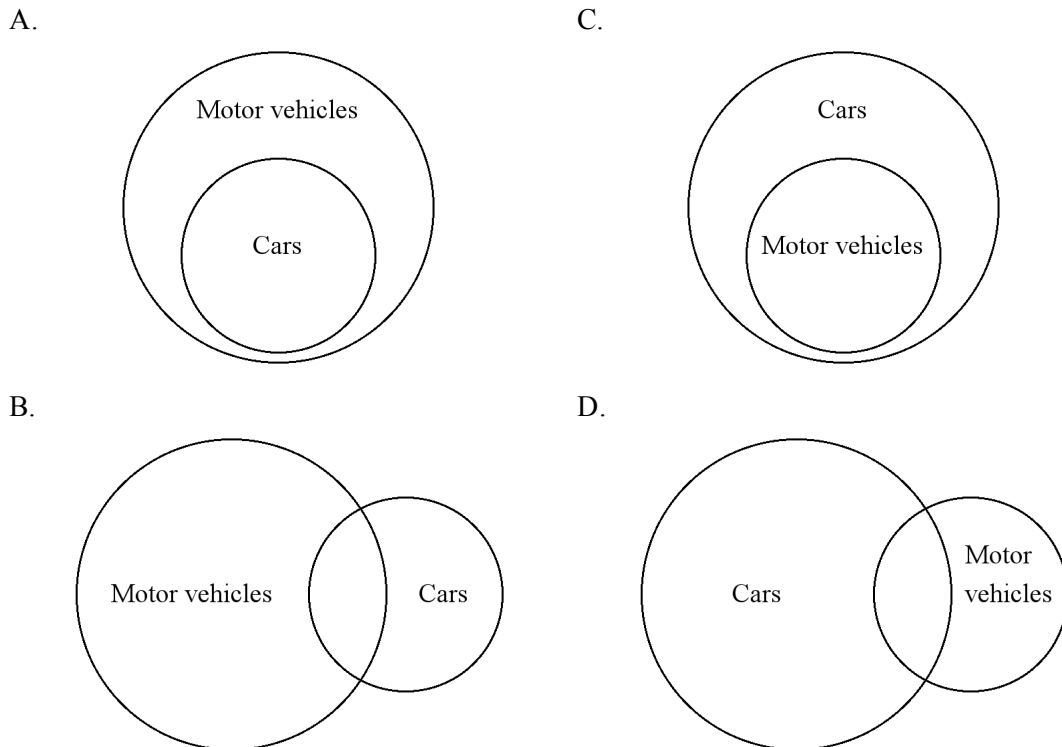


- A. 114 units B. 24 units C. 28 units D. 14 units

- _____ 9. Find, to the nearest tenth, the area of the region that is inside the square and outside the circle. The circle has a diameter of 6 inches.



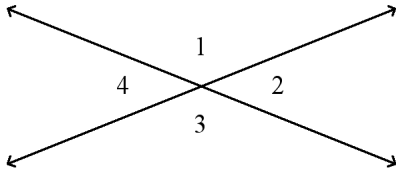
- A. 7.7 in.^2 B. 28.3 in.^2 C. 1.9 in.^2 D. 36 in.^2
- _____ 10. What is a counterexample for the conjecture?
 Conjecture: Any number that is divisible by 4 is also divisible by 8.
 A. 24 B. 40 C. 12 D. 26
- _____ 11. Another name for an *if-then* statement is a _____. Every conditional has two parts. The part following *if* is the _____, and the part following *then* is the _____.
 A. conditional; conclusion; hypothesis C. conditional; hypothesis; conclusion
 B. hypothesis; conclusion; conditional D. hypothesis; conditional; conclusion
- _____ 12. Draw a Venn diagram to illustrate this conditional:
 Cars are motor vehicles.



- _____ 13. A conditional can have a _____ of *true* or *false*.
 A. hypothesis C. counterexample
 B. truth value D. conclusion

- _____ 14. What is the converse of the following conditional?
If a point is in the fourth quadrant, then its coordinates are negative.
A. If a point is in the fourth quadrant, then its coordinates are negative.
B. If a point is not in the fourth quadrant, then the coordinates of the point are not negative.
C. If the coordinates of a point are not negative, then the point is not in the fourth quadrant.
D. If the coordinates of a point are negative, then the point is in the fourth quadrant.
- _____ 15. Is the following definition of *perpendicular* reversible? If yes, write it as a true biconditional.
Two lines that intersect at right angles are perpendicular.
A. The statement is not reversible.
B. Yes; if two lines intersect at right angles, then they are perpendicular.
C. Yes; if two lines are perpendicular, then they intersect at right angles.
D. Yes; two lines intersect at right angles if (and only if) they are perpendicular.
- _____ 16. Is the statement a good definition? If not, find a counterexample.
A square is a figure with two pairs of parallel sides and four right angles.
A. The statement is a good definition.
B. No; a rhombus is a counterexample.
C. No; a rectangle is a counterexample.
D. No; a parallelogram is a counterexample.
- _____ 17. Use the Law of Detachment to draw a conclusion from the two given statements. If not possible, write *not possible*.
I can go to the concert if I can afford to buy a ticket.
I can go to the concert.
A. I can afford to buy a ticket.
B. I cannot afford to buy the ticket.
C. If I can go to the concert, I can afford the ticket.
D. not possible
- _____ 18. Use the Law of Syllogism to draw a conclusion from the two given statements.
If you exercise regularly, then you have a healthy body.
If you have a healthy body, then you have more energy.
A. If you do not have more energy, then you do not exercise regularly.
B. You have more energy.
C. You have a healthy body.
D. If you exercise regularly, then you have more energy.
- _____ 19. Name the Property of Congruence that justifies this statement:
If $\angle A \cong \angle B$ and $\angle B \cong \angle C$, then $\angle A \cong \angle C$.
A. Transitive Property
B. Symmetric Property
C. Reflexive Property
D. none of these

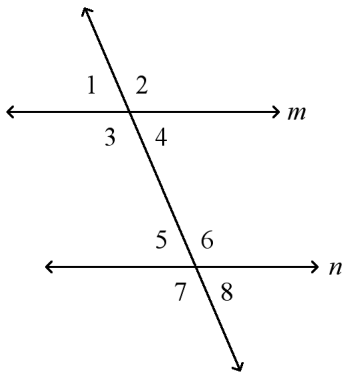
____ 20. $m\angle 2 = 30$. Find $m\angle 4$.



Drawing not to scale

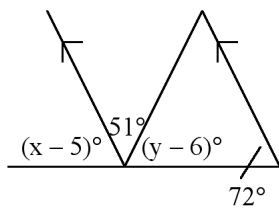
- A. 150 B. 30 C. 160 D. 20

____ 21. What is the relationship between $\angle 4$ and $\angle 5$?



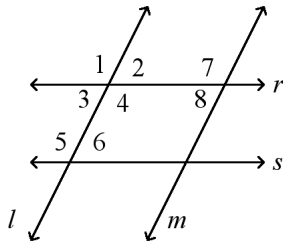
- A. corresponding angles C. alternate interior angles
 B. same-side interior angles D. alternate exterior angles

____ 22. Find the values of x and y . The diagram is not to scale.



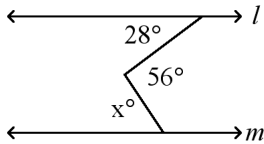
- A. $x = 51, y = 63$ C. $x = 63, y = 77$
 B. $x = 77, y = 63$ D. $x = 77, y = 65$

____ 23. Which lines are parallel if $m\angle 3 = m\angle 6$? Justify your answer.



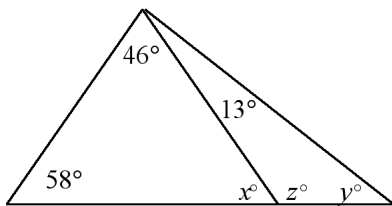
- A. $r \parallel s$, by the Converse of the Same-Side Interior Angles Postulate
- B. $r \parallel s$, by the Converse of the Alternate Interior Angles Theorem
- C. $l \parallel m$, by the Converse of the Alternate Interior Angles Theorem
- D. $l \parallel m$, by the Converse of the Same-Side Interior Angles Postulate

____ 24. Find the value of x for which l is parallel to m . The diagram is not to scale.



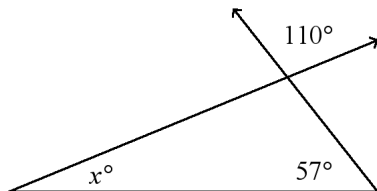
- A. 28
- B. 56
- C. 84
- D. 152

____ 25. Find the values of x , y , and z . The diagram is not to scale.



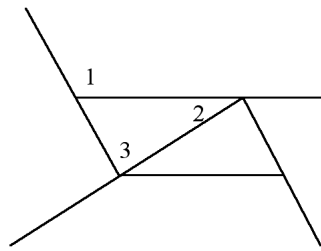
- A. $x = 63, y = 104, z = 76$
- B. $x = 76, y = 63, z = 104$
- C. $x = 63, y = 76, z = 104$
- D. $x = 76, y = 104, z = 63$

____ 26. Find the value of x . The diagram is not to scale.



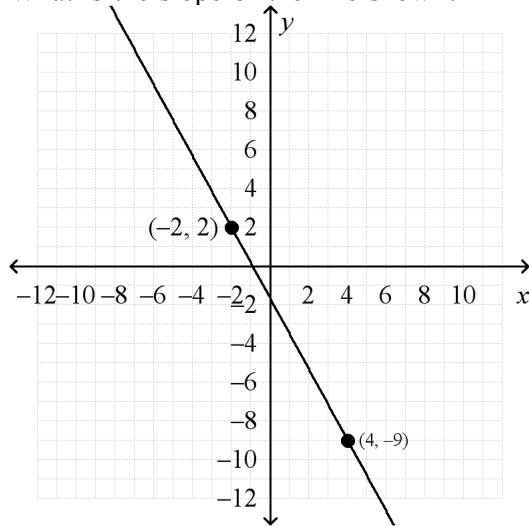
- A. 33
- B. 70
- C. 23
- D. 13

- ____ 27. The folding chair has different settings that change the angles formed by its parts. Suppose $m\angle 2$ is 34 and $m\angle 3$ is 76. Find $m\angle 1$. The diagram is not to scale.



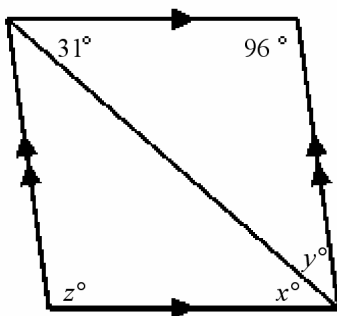
- A. 130 B. 110 C. 100 D. 120

- ____ 28. What is the slope of the line shown?



- A. $\frac{6}{11}$ C. $-\frac{11}{6}$
 B. $-\frac{6}{11}$ D. $\frac{11}{6}$

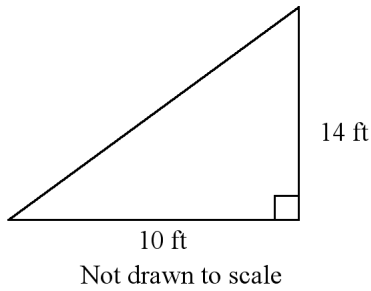
- ____ 29. Find the values of the variables in the parallelogram. The diagram is not to scale.



- A. $x = 53, y = 31, z = 96$ C. $x = 31, y = 53, z = 96$
 B. $x = 53, y = 53, z = 127$ D. $x = 31, y = 53, z = 127$

Find the length of the missing side. Leave your answer in simplest radical form.

_____ 30.

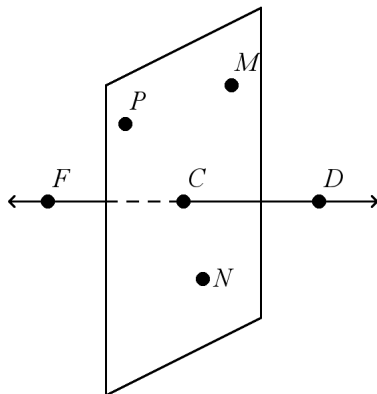


- A. $\sqrt{26}$ ft B. $\sqrt{206}$ ft C. 296 ft D. $2\sqrt{74}$ ft

_____ 31. A grid shows the positions of a subway stop and your house. The subway stop is located at $(-7, 8)$ and your house is located at $(6, 4)$. What is the distance, to the nearest unit, between your house and the subway stop?

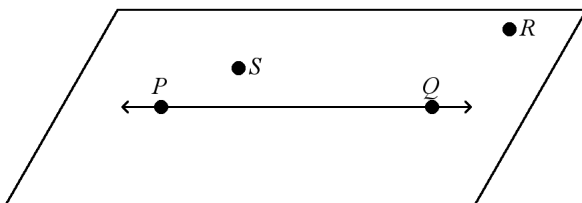
- A. 19 B. 14 C. 24 D. 11

_____ 32. What are the names of four coplanar points?



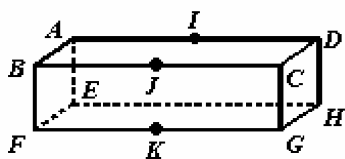
- A. Points $P, M, F,$ and C are coplanar.
 B. Points $F, D, P,$ and N are coplanar.
 C. Points $P, M, N,$ and C are coplanar.
 D. Points $P, M, D,$ and C are coplanar.

_____ 33. Name the line and plane shown in the diagram.



- A. \overleftrightarrow{QP} and plane SR C. \overleftrightarrow{PQ} and plane SP
 B. \overleftrightarrow{PQ} and plane PQS D. line P and plane PQS

____ 34. Name the plane represented by the front of the box.

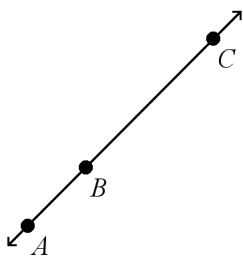


- A. CAB B. GBF C. BJC D. DBF

____ 35. ____ two points are collinear.

- A. Any B. Sometimes C. No

____ 36. What are the names of the segments in the figure?



- A. The three segments are \overline{AB} , \overline{CA} , and \overline{AC} .
 B. The three segments are \overline{AB} , \overline{BC} , and \overline{BA} .
 C. The three segments are \overline{AB} , \overline{BC} , and \overline{AC} .
 D. The two segments are \overline{AB} and \overline{BC} .

____ 37. Name the intersection of plane ACG and plane BCG .

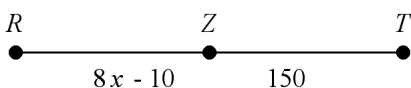
- A. \overleftrightarrow{AC} C. \overleftrightarrow{CG}
 B. \overleftrightarrow{BG} D. The planes need not intersect.

____ 38. If $EF = 2x - 12$, $FG = 3x - 15$, and $EG = 23$, find the values of x , EF , and FG . The drawing is not to scale.



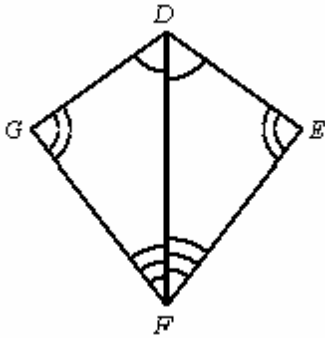
- A. $x = 10$, $EF = 8$, $FG = 15$ C. $x = 10$, $EF = 32$, $FG = 45$
 B. $x = 3$, $EF = -6$, $FG = -6$ D. $x = 3$, $EF = 8$, $FG = 15$

____ 39. If Z is the midpoint of \overline{RT} , what are x , RZ , and RT ?



- A. $x = 18$, $RZ = 134$, and $RT = 268$ C. $x = 20$, $RZ = 150$, and $RT = 300$
 B. $x = 22$, $RZ = 150$, and $RT = 300$ D. $x = 20$, $RZ = 300$, and $RT = 150$

___ 40. Complete the statement.

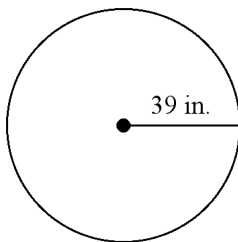


$$\angle GDF \cong ?$$

- A. $\angle DGF$
B. $\angle DEF$

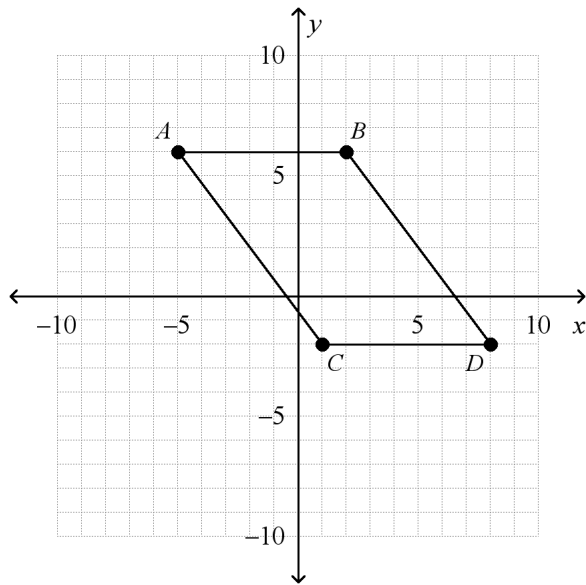
- C. $\angle EDF$
D. $\angle DFE$

- ___ 41. $\angle 1$ and $\angle 2$ are a linear pair. $m\angle 1 = x - 15$, and $m\angle 2 = x + 77$. Find the measure of each angle.
A. $\angle 1 = 59$, $\angle 2 = 131$ C. $\angle 1 = 44$, $\angle 2 = 146$
B. $\angle 1 = 44$, $\angle 2 = 136$ D. $\angle 1 = 59$, $\angle 2 = 121$
- ___ 42. $T(6, 12)$ is the midpoint of \overline{CD} . The coordinates of D are $(6, 15)$. What are the coordinates of C ?
A. $(6, 18)$ B. $(6, 24)$ C. $(6, 9)$ D. $(6, 13.5)$
- ___ 43. Find the distance between points $P(8, 2)$ and $Q(3, 8)$ to the nearest tenth.
A. 11 B. 7.8 C. 61 D. 14.9
- ___ 44. Jose wants to put a fence around his rectangular garden. His garden measures 33 feet by 39 feet. The garden has a path around it that is 3 feet wide. How much fencing material does Jose need to enclose the garden and path?
A. 120 ft B. 156 ft C. 168 ft D. 84 ft
- ___ 45. Find the circumference of the circle in terms of π .



- A. 156π in. B. 39π in. C. 1521π in. D. 78π in.

___ 46. Find the perimeter of parallelogram $ABCD$ with vertices $A(-5, 6)$, $B(2, 6)$, $C(1, -2)$, and $D(8, -2)$.

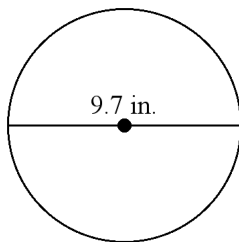


- A. 17 units B. 40 units C. 34 units D. 43 units

___ 47. If the perimeter of a square is 140 inches, what is its area?

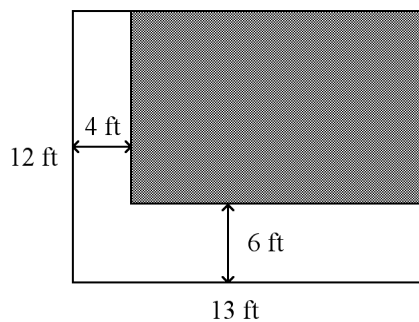
- A. 1225 in.^2 B. 35 in.^2 C. $19,600 \text{ in.}^2$ D. 140 in.^2

___ 48. Find the area of the circle to the nearest tenth. Use 3.14 for π .



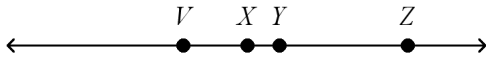
- A. 30.5 in.^2 B. 295.4 in.^2 C. 60.9 in.^2 D. 73.9 in.^2

___ 49. Write an expression that gives the area of the *shaded* region in the figure below. You do not have to evaluate the expression. The diagram is not to scale.

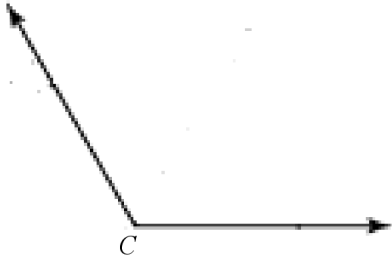


- A. $A = 12 \times 13 - 4 \times 6$ C. $A = (13 - 6) \times (12 - 4)$
 B. $A = (13 - 4) \times (12 - 6)$ D. $A = 12 \times 13 - (12 \times 4) - (13 \times 6)$

50. Name four rays shown.

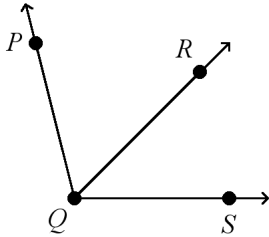


51. Construct
- \overrightarrow{CJ}
- , the bisector of
- $\angle C$
- .



- _____ 52. Based on the pattern, what are the next two terms of the sequence?
9, 15, 21, 27, . . .
- A. 33, 972 B. 39, 45 C. 162, 972 D. 33, 39
- _____ 53. What is the conclusion of the following conditional?
A number is divisible by 2 if the number is even.
- A. The sum of the digits of the number is divisible by 2.
B. If a number is even, then the number is divisible by 2.
C. The number is even.
D. The number is divisible by 2.
- _____ 54. Write the two conditional statements that make up the following biconditional.
I drink juice if (and only if) it is breakfast time.
- A. I drink juice if (and only if) it is breakfast time.
It is breakfast time if (and only if) I drink juice.
B. If I drink juice, then it is breakfast time.
If it is breakfast time, then I drink juice.
C. If I drink juice, then it is breakfast time.
I drink juice only if it is breakfast time.
D. I drink juice.
It is breakfast time.
- _____ 55. Which statement is the Law of Detachment?
- A. If $p \rightarrow q$ is a true statement and q is true, then p is true.
B. If $p \rightarrow q$ is a true statement and q is true, then $q \rightarrow p$ is true.
C. If $p \rightarrow q$ and $q \rightarrow r$ are true, then $p \rightarrow r$ is a true statement.
D. If $p \rightarrow q$ is a true statement and p is true, then q is true.

- _____ 56. What is the value of x ? Identify the missing justifications.
 $m\angle PQR = x - 5$, $m\angle SQR = x - 7$, and $m\angle PQS = 100$.



Drawing not to scale

$$m\angle PQR + m\angle SQR = m\angle PQS$$

$$x - 5 + x - 7 = 100$$

$$2x - 12 = 100$$

$$2x = 112$$

$$x = 56$$

a. _____

b. Substitution Property

c. Simplify

d. _____

e. Division Property of Equality

- A. Angle Addition Postulate; Subtraction Property of Equality
 B. Angle Addition Postulate; Addition Property of Equality
 C. Protractor Postulate; Addition Property of Equality
 D. Protractor Postulate; Subtraction Property of Equality

- _____ 57. Name the Property of Equality that justifies this statement:
 If $l = m$, then $m = l$.

A. Multiplication Property

C. Subtraction Property

B. Symmetric Property

D. Transitive Property

Use the given property to complete the statement.

- _____ 58. Multiplication Property of Equality

If $5x \div 9 = 36$, then _____.

A. $5x = 324$

C. $36 = 5x \div 9$

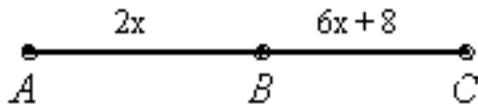
B. $5x \cdot 9 = 324$

D. $36 = 5x \cdot 9$

59. Solve for x . Justify each step.

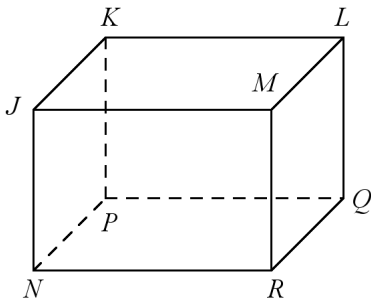
$$4x - 9 = 99$$

60. What is the value of x ? Justify each step.
 $AC = 32$



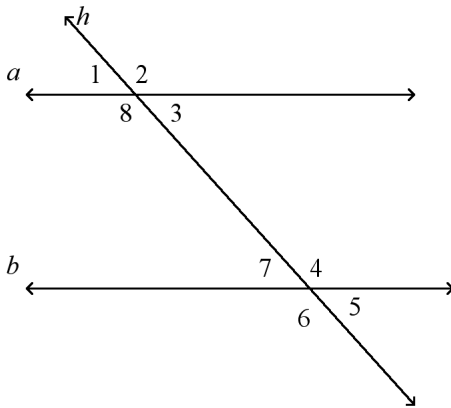
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- $AB + BC = AC$ a. _____
- $2x + 6x + 8 = 32$ b. _____
- $8x + 8 = 32$ c. _____
- $8x = 24$ d. _____
- $x = 3$ e. _____
61. What are the converse, inverse, and contrapositive of the following true conditional? What are the truth values of each? If a statement is false, give a counterexample.
 If a figure is a rectangle, then it is a parallelogram.



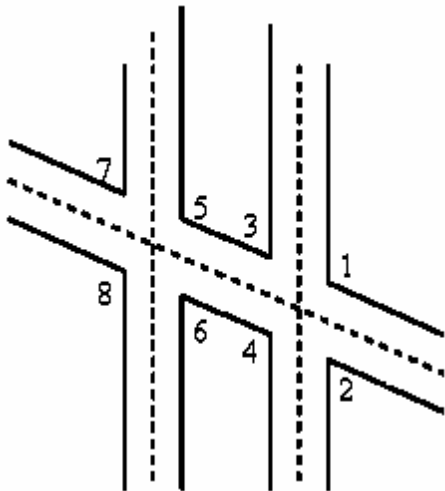
- _____ 62. What four segments are perpendicular to plane $JKPN$?
- A. segments ML , LQ , RQ , and MR C. segments JM , KL , PQ , and NR
- B. segments MR , LQ , NR , and PQ D. segments ML , RQ , JM , and NR

Use the diagram to find the following.



- _____ 63. Identify a pair of alternate exterior angles.
- A. $\angle 1$ and $\angle 5$
 - B. $\angle 8$ and $\angle 4$
 - C. $\angle 2$ and $\angle 5$
 - D. $\angle 1$ and $\angle 8$

This diagram of airport runway intersections shows two parallel runways. A taxiway crosses both runways.

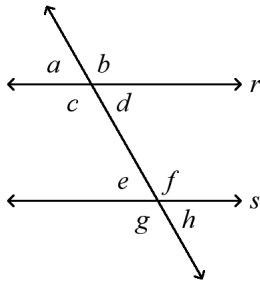


- _____ 64. How are $\angle 8$ and $\angle 4$ related?
- A. alternate interior angles
 - B. corresponding angles
 - C. same-side interior angles
 - D. none of these

____ 65. Which is a correct two-column proof?

Given: $r \parallel s$

Prove: $\angle b$ and $\angle h$ are supplementary.



A.

Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle c$	2. Vertical Angles
3. $\angle c$ and $\angle e$ are supplementary.	3. Same-Side Interior Angles
4. $\angle e \cong \angle h$	4. Vertical Angles
5. $\angle b$ and $\angle h$ are supplementary.	5. Substitution

B.

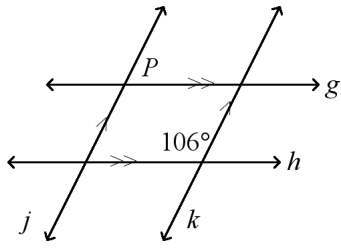
Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle h$	2. Corresponding Angles
3. $\angle c$ and $\angle e$ are supplementary.	3. Same-Side Exterior Angles
4. $\angle e \cong \angle h$	4. Vertical Angles
5. $\angle c$ and $\angle h$ are supplementary.	5. Substitution

C.

Statements	Reasons
1. $r \parallel s$	1. Given
2. $\angle b \cong \angle c$	2. Vertical Angles
3. $\angle d$ and $\angle h$ are supplementary.	3. Alternate Interior Angles
4. $\angle e \cong \angle h$	4. Vertical Angles
5. $\angle b$ and $\angle h$ are supplementary.	5. Same-Side Interior Angles

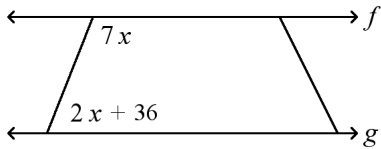
D. none of these

___ 66. Find $m\angle P$. The diagram is not to scale.



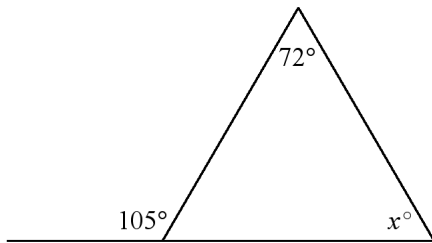
- A. 106 B. 74 C. 64 D. 84

___ 67. The expressions in the figure below represent the measures of two angles. Find the value of x . $f \parallel g$. The diagram is not to scale.



- A. 15 B. 17 C. -16 D. 16

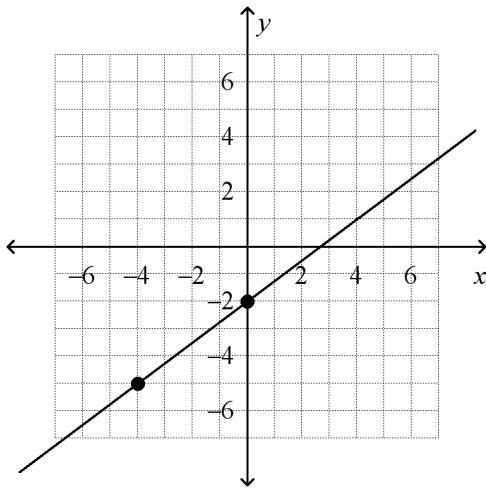
___ 68. Find the value of x . The diagram is not to scale.



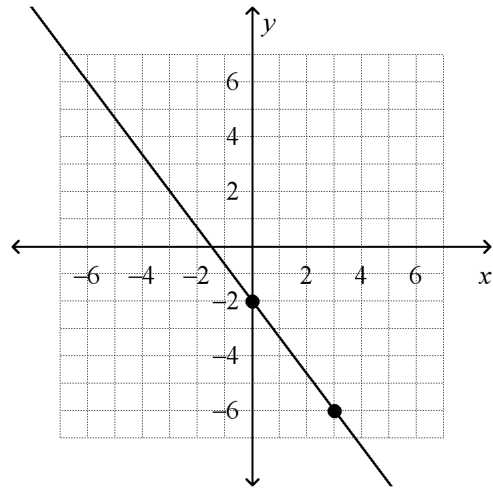
- A. 33 B. 162 C. 147 D. 75

_____ 69. What is the graph of $y = -\frac{3}{4}x - 2$?

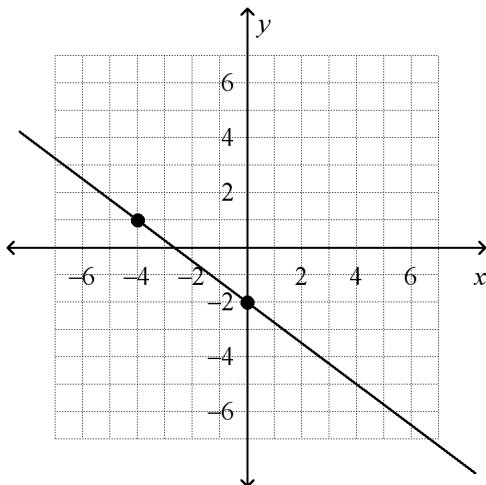
A.



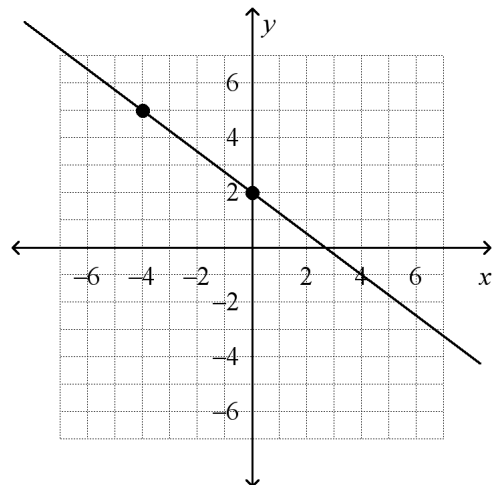
C.



B.



D.



_____ 70. Write an equation in slope-intercept form of the line through point $P(6, -1)$ with slope 4.

A. $y = 4x - 1$

C. $y + 1 = 4(x - 6)$

B. $y = 4x - 25$

D. $y + 6 = 4(x - 1)$

_____ 71. Write an equation in slope-intercept form of the line through points $S(-7, -6)$ and $T(10, 8)$.

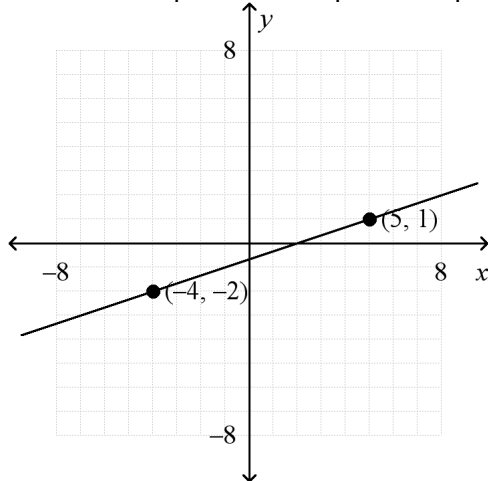
A. $y = -\frac{14}{17}x - \frac{4}{17}$

C. $y = \frac{14}{17}x + \frac{4}{17}$

B. $y = -\frac{14}{17}x + \frac{4}{17}$

D. $y = \frac{14}{17}x - \frac{4}{17}$

- _____ 72. What is an equation in slope-intercept form for the line given?

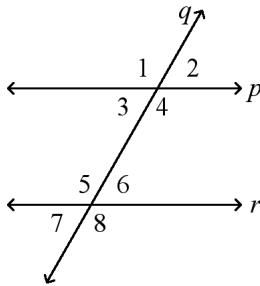


- A. $y = 1/3(x) + (-2/3)$ C. $y = 3(x) + (-2/3)$
 B. $y = 3(x) + (-10/3)$ D. $y = 1/3(x) - (-4)$
- _____ 73. Write the equation for the horizontal line that contains point $G(3, 4)$.
 A. $x = 4$ B. $y = 4$ C. $y = 3$ D. $x = 3$
- _____ 74. Which two lines are parallel?
 I. $5y = 2x - 5$
 II. $5y = 4 + 3x$
 III. $5y - 3x = -1$
- A. II and III C. I and III
 B. I and II D. No two of the lines are parallel.
- _____ 75. Are the lines $y = -x - 2$ and $4x + 4y = 16$ perpendicular? Explain.
 A. Yes; their slopes have product -1 .
 B. No; their slopes are not opposite reciprocals.
 C. Yes; their slopes are equal.
 D. No; their slopes are not equal
- _____ 76. Plans for a bridge are drawn on a coordinate grid. One girder of the bridge lies on the line $y = 9x + 3$. A perpendicular brace passes through the point $(-7, 3)$. Write an equation of the line that contains the brace.
 A. $y - 7 = \frac{1}{9}(x + 3)$ C. $x - 3 = 9(y + 7)$
 B. $y - 3 = -\frac{1}{9}(x + 7)$ D. $y - 3 = 9(x + 7)$

77. State the missing reasons in this proof.

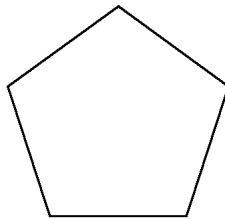
Given: $\angle 1 \cong \angle 5$

Prove: $p \parallel r$



Statements	Reasons
1. $\angle 1 \cong \angle 5$	Given
2. $\angle 4 \cong \angle 1$	a. _____
3. $\angle 4 \cong \angle 5$	b. _____
4. $p \parallel r$	c. _____

_____ 78. Find the sum of the measures of the angles of the figure.



- A. 1260 B. 900 C. 540 D. 720

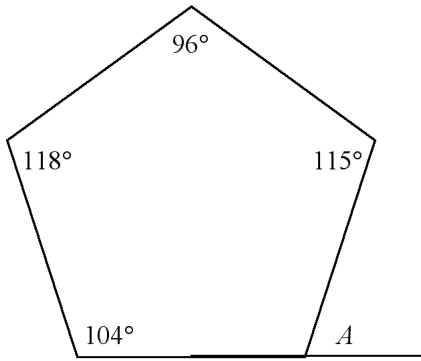
_____ 79. The Polygon Angle-Sum Theorem states: The sum of the measures of the angles of an n -gon is _____.

- A. $\frac{n-2}{180}$ B. $(n-1)180$ C. $\frac{180}{n-1}$ D. $(n-2)180$

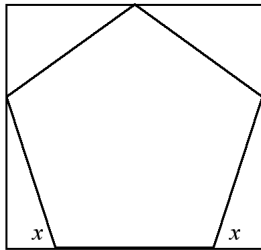
_____ 80. What is the measure of one angle in a regular 30-gon?

- A. 192 B. 84 C. 168 D. 5040

- _____ 81. Find $m\angle A$. The diagram is not to scale.



- A. 107 B. 117 C. 63 D. 73
- _____ 82. The sum of the measures of two exterior angles of a triangle is 264. What is the measure of the third exterior angle?
A. 96 B. 84 C. 106 D. 86
- _____ 83. Complete this statement: The sum of the measures of the exterior angles of an n -gon, one at each vertex, is _____.
A. $(n - 2)180$ B. 360 C. $\frac{(n - 2)180}{n}$ D. $180n$
- _____ 84. This jewelry box has the shape of a regular pentagon. It is packaged in a rectangular box as shown here. The box uses two pairs of congruent right triangles made of foam to fill its four corners. Find the measure of the foam angle marked.



- A. 54° B. 36° C. 18° D. 72°
- _____ 85. Use *less than*, *equal to*, or *greater than* to complete this statement: The sum of the measures of the exterior angles of a regular 9-gon, one at each vertex, is _____ the sum of the measures of the exterior angles of a regular 6-gon, one at each vertex.
A. cannot tell B. less than C. greater than D. equal to

Semester 1 Midterm Study Guide

Answer Section

1. ANS: C PTS: 1 DIF: L3 REF: 1-3 Measuring Segments
OBJ: 1-3.1 To find and compare lengths of segments NAT: CC G.CO.1| CC G.GPE.6| G.3.b
TOP: 1-3 Problem 2 Using the Segment Addition Postulate KEY: coordinate | distance
2. ANS: D PTS: 1 DIF: L3 REF: 1-4 Measuring Angles
OBJ: 1-4.1 To find and compare the measures of angles NAT: CC G.CO.1| M.1.d| G.3.b
TOP: 1-4 Problem 4 Using the Angle Addition Postulate KEY: Angle Addition Postulate
3. ANS: B PTS: 1 DIF: L3 REF: 1-5 Exploring Angle Pairs
OBJ: 1-5.1 To identify special angle pairs and use their relationships to find angle measures
NAT: CC G.CO.1| M.1.d| G.3.b TOP: 1-5 Problem 1 Identifying Angle Pairs
KEY: supplementary angles
4. ANS: A PTS: 1 DIF: L3 REF: 1-5 Exploring Angle Pairs
OBJ: 1-5.1 To identify special angle pairs and use their relationships to find angle measures
NAT: CC G.CO.1| M.1.d| G.3.b TOP: 1-5 Problem 1 Identifying Angle Pairs
KEY: adjacent angles | vertical angles
5. ANS: D PTS: 1 DIF: L3 REF: 1-5 Exploring Angle Pairs
OBJ: 1-5.1 To identify special angle pairs and use their relationships to find angle measures
NAT: CC G.CO.1| M.1.d| G.3.b
TOP: 1-5 Problem 4 Using an Angle Bisector to Find Angle Measures
KEY: angle bisector
6. ANS: D PTS: 1 DIF: L2
REF: 1-7 Midpoint and Distance in the Coordinate Plane
OBJ: 1-7.1 To find the midpoint of a segment
NAT: CC G.GPE.6| CC G.GPE.4| CC G.GPE.7| G.3.b| G.4.a
TOP: 1-7 Problem 1 Finding the Midpoint
KEY: coordinate plane | Midpoint Formula
7. ANS: C PTS: 1 DIF: L3
REF: 1-7 Midpoint and Distance in the Coordinate Plane
OBJ: 1-7.2 To find the distance between two points in the coordinate plane
NAT: CC G.GPE.6| CC G.GPE.4| CC G.GPE.7| G.3.b| G.4.a TOP: 1-7 Problem 4 Finding Distance
KEY: coordinate plane | Distance Formula | word problem | problem solving
8. ANS: B PTS: 1 DIF: L3
REF: 1-8 Perimeter, Circumference, and Area
OBJ: 1-8.1 To find the perimeter or circumference of basic shapes
NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
TOP: 1-8 Problem 3 Finding Perimeter in the Coordinate Plane
KEY: triangle | perimeter | coordinate plane | Distance Formula
9. ANS: A PTS: 1 DIF: L3
REF: 1-8 Perimeter, Circumference, and Area
OBJ: 1-8.2 To find the area of basic shapes
NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
TOP: 1-8 Problem 6 Finding Area of an Irregular Shape KEY: circle | square | area
10. ANS: C PTS: 1 DIF: L2
REF: 2-1 Patterns and Inductive Reasoning
OBJ: 2-1.1 To use inductive reasoning to make conjectures
NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
TOP: 2-1 Problem 5 Finding a Counterexample KEY: conjecture | counterexample

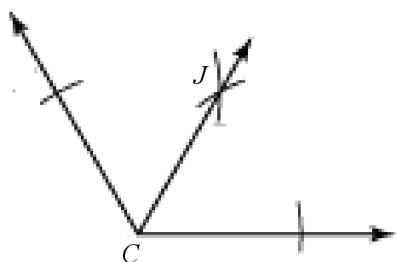
11. ANS: C PTS: 1 DIF: L2 REF: 2-2 Conditional Statements
 OBJ: 2-2.1 To recognize conditional statements and their parts
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
 TOP: 2-2 Problem 1 Identifying the Hypothesis and the Conclusion
 KEY: conditional statement | hypothesis | conclusion
12. ANS: A PTS: 1 DIF: L3 REF: 2-2 Conditional Statements
 OBJ: 2-2.1 To recognize conditional statements and their parts
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
 TOP: 2-2 Problem 2 Writing a Conditional
 KEY: conditional statement | Venn Diagram
13. ANS: B PTS: 1 DIF: L3 REF: 2-2 Conditional Statements
 OBJ: 2-2.1 To recognize conditional statements and their parts
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
 TOP: 2-2 Problem 3 Finding the Truth Value of a Conditional
 KEY: conditional statement | truth value
14. ANS: D PTS: 1 DIF: L2 REF: 2-2 Conditional Statements
 OBJ: 2-2.2 To write converses, inverses, and contrapositives of conditionals
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11
 TOP: 2-2 Problem 4 Writing and Finding Truth Values of Statements
 KEY: conditional statement | converse of a conditional
15. ANS: D PTS: 1 DIF: L3 REF: 2-3 Biconditionals and Definitions
 OBJ: 2-3.1 To write biconditionals and recognize good definitions
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.1.c
 TOP: 2-3 Problem 3 Writing a Definition as a Biconditional KEY: biconditional statement
16. ANS: C PTS: 1 DIF: L3 REF: 2-3 Biconditionals and Definitions
 OBJ: 2-3.1 To write biconditionals and recognize good definitions
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.1.c
 TOP: 2-3 Problem 4 Identifying Good Definitions
 KEY: biconditional statement | counterexample
17. ANS: D PTS: 1 DIF: L3 REF: 2-4 Deductive Reasoning
 OBJ: 2-4.1 To use the Law of Detachment and the Law of Syllogism
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11
 TOP: 2-4 Problem 1 Using the Law of Detachment
 KEY: deductive reasoning | Law of Detachment
18. ANS: D PTS: 1 DIF: L3 REF: 2-4 Deductive Reasoning
 OBJ: 2-4.1 To use the Law of Detachment and the Law of Syllogism
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11
 TOP: 2-4 Problem 2 Using the Law of Syllogism
 KEY: deductive reasoning | Law of Syllogism
19. ANS: A PTS: 1 DIF: L2
 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 2 Using Properties of Equality and Congruence
 KEY: Properties of Congruence | Transitive Property
20. ANS: B PTS: 1 DIF: L2 REF: 2-6 Proving Angles Congruent
 OBJ: 2-6.1 To prove and apply theorems about angles NAT: CC G.CO.9| G.5.b
 TOP: 2-6 Problem 1 Using the Vertical Angles Theorem
 KEY: Vertical Angles Theorem | vertical angles

21. ANS: C PTS: 1 DIF: L3 REF: 3-1 Lines and Angles
 OBJ: 3-1.2 To identify angles formed by two lines and a transversal
 NAT: CC G.CO.1| CC G.CO.12| M.1.d| G.3.g
 TOP: 3-1 Problem 3 Classifying an Angle Pair
 KEY: angle pairs | transversal | parallel lines
22. ANS: B PTS: 1 DIF: L4 REF: 3-2 Properties of Parallel Lines
 OBJ: 3-2.2 To use properties of parallel lines to find angle measures
 NAT: CC G.CO.9| M.1.d| G.3.g TOP: 3-2 Problem 4 Finding an Angle Measure
 KEY: corresponding angles | parallel lines
23. ANS: B PTS: 1 DIF: L2 REF: 3-3 Proving Lines Parallel
 OBJ: 3-3.1 To determine whether two lines are parallel NAT: CC G.CO.9| G.3.b| G.3.g
 TOP: 3-3 Problem 3 Determining Whether Lines are Parallel
 KEY: parallel lines | reasoning
24. ANS: A PTS: 1 DIF: L4 REF: 3-3 Proving Lines Parallel
 OBJ: 3-3.1 To determine whether two lines are parallel NAT: CC G.CO.9| G.3.b| G.3.g
 TOP: 3-3 Problem 4 Using Algebra KEY: parallel lines | transversal
25. ANS: B PTS: 1 DIF: L3 REF: 3-5 Parallel Lines and Triangles
 OBJ: 3-5.2 To find measures of angles of triangles NAT: CC G.CO.10| M.1.d| G.3.g
 TOP: 3-5 Problem 1 Using the Triangle Angle-Sum Theorem
 KEY: triangle | sum of angles of a triangle
26. ANS: D PTS: 1 DIF: L3 REF: 3-5 Parallel Lines and Triangles
 OBJ: 3-5.2 To find measures of angles of triangles NAT: CC G.CO.10| M.1.d| G.3.g
 TOP: 3-5 Problem 2 Using the Triangle Exterior Angle Theorem
 KEY: triangle | sum of angles of a triangle | vertical angles
27. ANS: B PTS: 1 DIF: L3 REF: 3-5 Parallel Lines and Triangles
 OBJ: 3-5.2 To find measures of angles of triangles NAT: CC G.CO.10| M.1.d| G.3.g
 TOP: 3-5 Problem 3 Applying the Triangle Theorems
 KEY: triangle | sum of angles of a triangle | word problem | exterior angle of a polygon
28. ANS: C PTS: 1 DIF: L3
 REF: 3-7 Equations of Lines in the Coordinate Plane
 OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
 TOP: 3-7 Problem 1 Finding Slopes of Lines KEY: slope | linear graph | graph of line
29. ANS: C PTS: 1 DIF: L4 REF: 6-2 Properties of Parallelograms
 OBJ: 6-2.1 To use relationships among sides and angles of parallelograms
 NAT: CC G.CO.11| CC G.SRT.5| G.1.c| G.3.f
 TOP: 6-2 Problem 1 Using Consecutive Angles
 KEY: parallelogram | opposite angles | consecutive angles | transversal
30. ANS: D PTS: 1 DIF: L3
 REF: 8-1 The Pythagorean Theorem and Its Converse
 OBJ: 8-1.1 To use the Pythagorean theorem and its converse
 NAT: CC G.SRT.4| CC G.SRT.8| N.5.e| G.3.d
 TOP: 8-1 Problem 1 Finding the Length of the Hypotenuse
 KEY: Pythagorean Theorem | leg | hypotenuse

31. ANS: B PTS: 1 DIF: L3
REF: 8-1 The Pythagorean Theorem and Its Converse
OBJ: 8-1.1 To use the Pythagorean theorem and its converse
NAT: CC G.SRT.4| CC G.SRT.8| N.5.e| G.3.d TOP: 8-1 Problem 3 Finding Distance
KEY: Pythagorean Theorem | leg | hypotenuse | word problem | problem solving
32. ANS: C PTS: 1 DIF: L3 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 1 Naming Points, Lines, and Planes
KEY: coplanar | point
33. ANS: B PTS: 1 DIF: L3 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 1 Naming Points, Lines, and Planes
KEY: line | plane
34. ANS: B PTS: 1 DIF: L2 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 1 Naming Points, Lines, and Planes
KEY: plane
35. ANS: A PTS: 1 DIF: L2 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 1 Naming Points, Lines, and Planes
KEY: point | collinear points | reasoning
36. ANS: C PTS: 1 DIF: L3 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 2 Naming Segments and Rays
KEY: segment
37. ANS: C PTS: 1 DIF: L4 REF: 1-2 Points, Lines, and Planes
OBJ: 1-2.1 To understand basic terms and postulates of geometry
NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 3 Finding the Intersection of Two Planes
KEY: plane | intersection
38. ANS: A PTS: 1 DIF: L4 REF: 1-3 Measuring Segments
OBJ: 1-3.1 To find and compare lengths of segments NAT: CC G.CO.1| CC G.GPE.6| G.3.b
TOP: 1-3 Problem 2 Using the Segment Addition Postulate KEY: coordinate | distance
39. ANS: C PTS: 1 DIF: L3 REF: 1-3 Measuring Segments
OBJ: 1-3.1 To find and compare lengths of segments NAT: CC G.CO.1| CC G.GPE.6| G.3.b
TOP: 1-3 Problem 4 Using the Midpoint KEY: midpoint
40. ANS: C PTS: 1 DIF: L3 REF: 1-4 Measuring Angles
OBJ: 1-4.1 To find and compare the measures of angles NAT: CC G.CO.1| M.1.d| G.3.b
TOP: 1-4 Problem 3 Using Congruent Angles KEY: congruent angles
41. ANS: B PTS: 1 DIF: L3 REF: 1-5 Exploring Angle Pairs
OBJ: 1-5.1 To identify special angle pairs and use their relationships to find angle measures
NAT: CC G.CO.1| M.1.d| G.3.b TOP: 1-5 Problem 3 Finding Missing Angle Measures
KEY: supplementary angles| linear pair
42. ANS: C PTS: 1 DIF: L2
REF: 1-7 Midpoint and Distance in the Coordinate Plane
OBJ: 1-7.1 To find the midpoint of a segment
NAT: CC G.GPE.6| CC G.GPE.4| CC G.GPE.7| G.3.b| G.4.a
TOP: 1-7 Problem 2 Finding an Endpoint
KEY: coordinate plane | Midpoint Formula

43. ANS: B PTS: 1 DIF: L3
 REF: 1-7 Midpoint and Distance in the Coordinate Plane
 OBJ: 1-7.2 To find the distance between two points in the coordinate plane
 NAT: CC G.GPE.6| CC G.GPE.4| CC G.GPE.7| G.3.b| G.4.a TOP: 1-7 Problem 3 Finding Distance
 KEY: Distance Formula | coordinate plane
44. ANS: C PTS: 1 DIF: L4
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.1 To find the perimeter or circumference of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 1 Finding the Perimeter of a Rectangle
 KEY: perimeter | word problem | problem solving
45. ANS: D PTS: 1 DIF: L3
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.1 To find the perimeter or circumference of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 2 Finding Circumference KEY: circle | circumference
46. ANS: C PTS: 1 DIF: L3
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.1 To find the perimeter or circumference of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 3 Finding Perimeter in the Coordinate Plane
 KEY: perimeter | coordinate plane | Distance Formula
47. ANS: A PTS: 1 DIF: L3
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.2 To find the area of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 4 Finding Area of a Rectangle KEY: area | square
48. ANS: D PTS: 1 DIF: L2
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.2 To find the area of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 5 Finding Area of a Circle KEY: area | circle
49. ANS: B PTS: 1 DIF: L2
 REF: 1-8 Perimeter, Circumference, and Area
 OBJ: 1-8.2 To find the area of basic shapes
 NAT: CC N.Q.1| M.1.c| M.1.f| M.2.a| G.3.b| A.4.e
 TOP: 1-8 Problem 6 Finding Area of an Irregular Shape KEY: rectangle | area
50. ANS:
 Answers may vary. Sample: \overrightarrow{VX} , \overrightarrow{XY} , \overrightarrow{YZ} , \overrightarrow{ZY}
- PTS: 1 DIF: L3 REF: 1-2 Points, Lines, and Planes
 OBJ: 1-2.1 To understand basic terms and postulates of geometry
 NAT: CC G.CO.1| G.3.b| G.4.b TOP: 1-2 Problem 2 Naming Segments and Rays
 KEY: point | ray

51. ANS:



- PTS: 1 DIF: L2 REF: 1-6 Basic Constructions
 OBJ: 1-6.1 To make basic constructions using a straightedge and a compass
 NAT: CC G.CO.12| G.1.d| G.3.b TOP: 1-6 Problem 4 Constructing the Angle Bisector
 KEY: angle bisector | construction
52. ANS: D PTS: 1 DIF: L3
 REF: 2-1 Patterns and Inductive Reasoning
 OBJ: 2-1.1 To use inductive reasoning to make conjectures
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
 TOP: 2-1 Problem 1 Finding and Using a Pattern KEY: pattern | inductive reasoning
53. ANS: D PTS: 1 DIF: L3 REF: 2-2 Conditional Statements
 OBJ: 2-2.1 To recognize conditional statements and their parts
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.a
 TOP: 2-2 Problem 1 Identifying the Hypothesis and the Conclusion
 KEY: conditional statement | conclusion
54. ANS: B PTS: 1 DIF: L3 REF: 2-3 Biconditionals and Definitions
 OBJ: 2-3.1 To write biconditionals and recognize good definitions
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.1.c
 TOP: 2-3 Problem 2 Identifying the Conditionals in a Biconditional
 KEY: biconditional statement | conditional statement
55. ANS: D PTS: 1 DIF: L3 REF: 2-4 Deductive Reasoning
 OBJ: 2-4.1 To use the Law of Detachment and the Law of Syllogism
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11
 TOP: 2-4 Problem 1 Using the Law of Detachment
 KEY: Law of Detachment | deductive reasoning
56. ANS: B PTS: 1 DIF: L3
 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 1 Justifying Steps When Solving an Equation
 KEY: Properties of Equality | Angle Addition Postulate | deductive reasoning
57. ANS: B PTS: 1 DIF: L2
 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 2 Using Properties of Equality and Congruence
 KEY: Properties of Equality | Symmetric Property

58. ANS: A PTS: 1 DIF: L3
 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 2 Using Properties of Equality and Congruence
 KEY: Properties of Equality

59. ANS:
 $4x - 9 = 99$ Given
 $4x - 9 + 9 = 99 + 9$ Addition Property of Equality
 $4x = 108$ Simplify
 $\frac{4x}{4} = \frac{108}{4}$ Division Property of Equality
 $x = 27$ Simplify

PTS: 1 DIF: L4 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 1 Justifying Steps When Solving an Equation
 KEY: Properties of Equality | proof | deductive reasoning

60. ANS:
 a. Segment Addition Postulate
 b. Substitution
 c. Simplify
 d. Subtraction Property of Equality
 e. Division Property of Equality

PTS: 1 DIF: L3 REF: 2-5 Reasoning in Algebra and Geometry
 OBJ: 2-5.1 To connect reasoning in algebra and geometry
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11| G.5.b
 TOP: 2-5 Problem 1 Justifying Steps When Solving an Equation
 KEY: deductive reasoning | proof | Properties of Equality

61. ANS:
 Converse:
 If a figure is a parallelogram, then it is a rectangle.
 The converse is false. A parallelogram that does not have four 90° angles is not a rectangle.
- Inverse:
 If a figure is not a rectangle, then it is not a parallelogram.
 The inverse is false. A parallelogram with angles that are not all 90° angles is not a rectangle, but it is a parallelogram.
- Contrapositive:
 If a figure is not a parallelogram, then it is not a rectangle.
 The contrapositive is true.

PTS: 1 DIF: L4 REF: 2-2 Conditional Statements
 OBJ: 2-2.2 To write converses, inverses, and contrapositives of conditionals
 NAT: CC G.CO.9| CC G.CO.10| CC G.CO.11
 TOP: 2-2 Problem 4 Writing and Finding Truth Values of Statements
 KEY: truth value | converse | inverse | contrapositive | conditional | multi-part question

62. ANS: C PTS: 1 DIF: L3 REF: 3-1 Lines and Angles
 OBJ: 3-1.1 To identify relationships between figures in space
 NAT: CC G.CO.1| CC G.CO.12| M.1.d| G.3.g
 TOP: 3-1 Problem 1 Identifying Nonintersecting Lines and Planes
 KEY: parallel planes | parallel lines
63. ANS: A PTS: 1 DIF: L3 REF: 3-1 Lines and Angles
 OBJ: 3-1.2 To identify angles formed by two lines and a transversal
 NAT: CC G.CO.1| CC G.CO.12| M.1.d| G.3.g
 TOP: 3-1 Problem 2 Identifying an Angle Pair
 KEY: transversal | alternate exterior angles | parallel lines
64. ANS: B PTS: 1 DIF: L2 REF: 3-1 Lines and Angles
 OBJ: 3-1.2 To identify angles formed by two lines and a transversal
 NAT: CC G.CO.1| CC G.CO.12| M.1.d| G.3.g
 TOP: 3-1 Problem 3 Classifying an Angle Pair
 KEY: parallel lines | transversal | angle pairs
65. ANS: A PTS: 1 DIF: L2 REF: 3-2 Properties of Parallel Lines
 OBJ: 3-2.1 To prove theorems about parallel lines NAT: CC G.CO.9| M.1.d| G.3.g
 TOP: 3-2 Problem 2 Proving an Angle Relationship
 KEY: proof | two-column proof | supplementary angles | parallel lines | reasoning
66. ANS: B PTS: 1 DIF: L3 REF: 3-2 Properties of Parallel Lines
 OBJ: 3-2.2 To use properties of parallel lines to find angle measures
 NAT: CC G.CO.9| M.1.d| G.3.g TOP: 3-2 Problem 3 Finding Measures of Angles
 KEY: angle | parallel lines | transversal
67. ANS: D PTS: 1 DIF: L4 REF: 3-2 Properties of Parallel Lines
 OBJ: 3-2.2 To use properties of parallel lines to find angle measures
 NAT: CC G.CO.9| M.1.d| G.3.g TOP: 3-2 Problem 4 Finding an Angle Measure
 KEY: corresponding angles | parallel lines | angle pairs
68. ANS: A PTS: 1 DIF: L2 REF: 3-5 Parallel Lines and Triangles
 OBJ: 3-5.2 To find measures of angles of triangles NAT: CC G.CO.10| M.1.d| G.3.g
 TOP: 3-5 Problem 2 Using the Triangle Exterior Angle Theorem
 KEY: triangle | sum of angles of a triangle | exterior angle of a polygon | remote interior angles
69. ANS: B PTS: 1 DIF: L3
 REF: 3-7 Equations of Lines in the Coordinate Plane
 OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
 TOP: 3-7 Problem 2 Graphing Lines KEY: slope-intercept form | graphing
70. ANS: B PTS: 1 DIF: L3
 REF: 3-7 Equations of Lines in the Coordinate Plane
 OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
 TOP: 3-7 Problem 3 Writing Equations of Lines KEY: slope-intercept form
71. ANS: D PTS: 1 DIF: L3
 REF: 3-7 Equations of Lines in the Coordinate Plane
 OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
 TOP: 3-7 Problem 4 Using Two Points to Write an Equation
 KEY: slope-intercept form | slope

72. ANS: A PTS: 1 DIF: L4
REF: 3-7 Equations of Lines in the Coordinate Plane
OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
TOP: 3-7 Problem 4 Using Two Points to Write an Equation
KEY: point-slope form
73. ANS: B PTS: 1 DIF: L3
REF: 3-7 Equations of Lines in the Coordinate Plane
OBJ: 3-7.1 To graph and write linear equations NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
TOP: 3-7 Problem 5 Writing Equations of Horizontal and Vertical Lines
KEY: horizontal line
74. ANS: A PTS: 1 DIF: L3
REF: 3-8 Slopes of Parallel and Perpendicular Lines
OBJ: 3-8.1 To relate slope to parallel and perpendicular lines
NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d TOP: 3-8 Problem 1 Checking for Parallel Lines
KEY: slopes of parallel lines | parallel lines
75. ANS: B PTS: 1 DIF: L3
REF: 3-8 Slopes of Parallel and Perpendicular Lines
OBJ: 3-8.1 To relate slope to parallel and perpendicular lines
NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d
TOP: 3-8 Problem 4 Writing Equations of Perpendicular Lines
KEY: slopes of perpendicular lines | perpendicular lines | reasoning
76. ANS: B PTS: 1 DIF: L3
REF: 3-8 Slopes of Parallel and Perpendicular Lines
OBJ: 3-8.1 To relate slope to parallel and perpendicular lines
NAT: CC G.GPE.5| G.3.g| G.4.a| G.4.d TOP: 3-8 Problem 5 Writing Equations of Lines
KEY: word problem | problem solving | perpendicular lines | slopes of perpendicular lines
77. ANS:
a. Vertical angles.
b. Transitive Property.
c. Alternate Interior Angles Converse.
- PTS: 1 DIF: L3 REF: 3-3 Proving Lines Parallel
OBJ: 3-3.1 To determine whether two lines are parallel NAT: CC G.CO.9| G.3.b| G.3.g
TOP: 3-3 Problem 2 Writing a Flow Proof of Theorem 3-6
KEY: two-column proof | proof | reasoning | corresponding angles | multi-part question
78. ANS: C PTS: 1 DIF: L2
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.1 To find the sum of the measures of the interior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 1 Finding a Polygon Angle Sum
KEY: Polygon Angle-Sum Theorem
79. ANS: D PTS: 1 DIF: L3
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.1 To find the sum of the measures of the interior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 1 Finding a Polygon Angle Sum
KEY: Polygon Angle-Sum Theorem
80. ANS: C PTS: 1 DIF: L3
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.1 To find the sum of the measures of the interior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 2 Using the Polygon Angle-Sum
KEY: Corollary to the Polygon Angle-Sum Theorem | regular polygon

81. ANS: D PTS: 1 DIF: L4
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.1 To find the sum of the measures of the interior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 3 Using the Polygon Angle-Sum Theorem
KEY: pentagon | exterior angle | sum of angles of a polygon
82. ANS: A PTS: 1 DIF: L3
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.2 To find the sum of the measures of the exterior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
KEY: exterior angle | Polygon Angle-Sum Theorem
83. ANS: B PTS: 1 DIF: L3
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.2 To find the sum of the measures of the exterior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
KEY: Polygon Exterior Angle-Sum Theorem
84. ANS: D PTS: 1 DIF: L4
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.2 To find the sum of the measures of the exterior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
KEY: regular polygon | Polygon Angle-Sum Theorem
85. ANS: D PTS: 1 DIF: L3
REF: 6-1 The Polygon Angle-Sum Theorems
OBJ: 6-1.2 To find the sum of the measures of the exterior angles of a polygon
NAT: CC G.SRT.5| M.1.d| G.3.f TOP: 6-1 Problem 4 Finding an Exterior Angle Measure
KEY: regular polygon