

**All work must be shown when the directions indicate that you show work to receive the points for completing this packet as part of your exam grade.

***DO NOT LOSE THIS PACKET!!! If you do, you must print a new copy off the Internet.

Chapter 1:

- _____ 1. Two nonadjacent angles formed by two intersecting lines
- _____ 2. An angle whose measure is greater than 0° and less than 90°
- _____ 3. A segment, ray, line or plane that divides a segment into two congruent segments
- _____ 4. A figure formed by two rays with a common endpoint
- _____ 5. Points that lie on the same line
- _____ 6. Points that lie on the same plane
- _____ 7. Two angles in the same plane with a common vertex and a common side but no common interior points
- _____ 8. The point that divides a segment into two congruent segments
- _____ 9. An angle whose measure is greater than 90° and less than 180°
- _____ 10. A ray that divides an angle into two congruent angles
- _____ 11. An angle whose measure is 90°
- _____ 12. Two angles whose measure have a sum of 180°
- _____ 13. An angle whose measure is 180°
- _____ 14. The common endpoint of the sides of an angle
- _____ 15. Two angles whose measures have a sum of 90°
- _____ 16. The part of a line consisting of two points and all the points between them
- _____ 17. A pair of adjacent angles whose noncommon sides are opposite rays
- _____ 18. Two rays with a common endpoint that form a line
- _____ 19. The part of a line that starts at an endpoint and extends forever in one direction
- _____ 20. The three undefined terms in Geometry are: _____ , _____ and _____ .

Chapter 2:

- _____ 21. the part p of a conditional statement following the word *if*
- _____ 22. statement formed by negating the hypothesis and conclusion [$\sim p \rightarrow \sim q$]
- _____ 23. of statement p is “not p ,” written as $\sim p$; the negation of a true statement is false and the negation of a false statement is true; we use these to write related conditional statements
- _____ 24. a statement that can be written in the form “if p , then q ”
- _____ 25. a statement can have this value of true (T) or false (F)
- _____ 26. the part q of a conditional statement following the word *then*
- _____ 27. statement formed by exchanging the hypothesis and conclusion [$q \rightarrow p$]
- _____ 28. an example that proves that a conjecture or statement is false; a drawing, a statement or a number
- _____ 29. statement formed by both exchanging and negating the hypothesis and conclusion [$\sim q \rightarrow \sim p$]
- _____ 30. a statement that describes a mathematical object and can be written as a true biconditional
- _____ 31. 4-sided polygon
- _____ 32. a 3-sided polygon
- _____ 33. the process of using logic to draw conclusions from given facts, definitions & properties
- _____ 34. a statement that can be written in the form “ p if and only if q ” or “if p , then q ” and “if q , then p .”
- _____ 35. related conditional statements that have the same truth value
- _____ 36. a closed plane figure formed by 3 or more line segments such that each segment intersects exactly 2 other segments only at their endpoints and no 2 segments with a common endpoint are collinear
- _____ 37. the process of reasoning that a rule or statement is true because specific cases are true
- _____ 38. a statement you believe to be true based on inductive reasoning
- _____ 39. uses boxes and arrows to show the structure of the proof
- _____ 40. a style of proof in which the statements and reasons are presented in paragraph form
- _____ 41. any statement you can prove

- _____ 42. the process of using logic to draw conclusions from given facts, definitions & properties
- _____ 43. an argument that uses logic, definitions, properties, and previously proven statements to show that a conclusion is true
- _____ 44. the process of reasoning that a rule or statement is true because specific cases are true
- _____ 45. a style of proof in which the statements are written in the left-hand column and the reasons are written in the right-hand column

Chapter 3:

- _____ 46. for two lines intersected by a transversal, a pair of angles that are on the same side of the transversal and between the two lines
- _____ 47. for two lines intersected by a transversal, a pair of angles that are on the same side of the transversal and on the same sides of the other two lines
- _____ 48. for two lines intersected by a transversal, a pair of angles that are on opposite sides of the transversal and between the other two lines
- _____ 49. for two lines intersected by a transversal, a pair of angles that are on opposite sides of the transversal and outside the other two lines
- _____ 50. a line that intersects two coplanar lines at two different points
- _____ 51. two nonadjacent angles formed by two intersecting lines
- _____ 52. Two angles whose measure have a sum of 180°
- _____ 53. the difference in the x-values of two points on a line
- _____ 54. the difference in the y-values of two points on a line
- _____ 55. a measure of the steepness of a line
- _____ 56. a line with slope m and y-intercept b can be written in the form $y = mx + b$
- _____ 57. the length of the perpendicular segment from the point to the line
- _____ 58. $y - y_1 = m(x - x_1)$ where m is the slope and (x_1, y_1) is a point on the line
- _____ 59. the value on the x-axis where $y = 0$
- _____ 60. the value on the y-axis where $x = 0$
- _____ 61. lines in the same plane that do not intersect
- _____ 62. lines that intersect at 90° angles
- _____ 63. planes that do not intersect
- _____ 64. lines that are not coplanar

_____ 65. a line perpendicular to a segment at the segment's midpoint

_____ 66. planes that meet at 90° angles

_____ 67. a ray that divides an angle into two congruent angles

Chapter 4:

_____ 68. triangle with three acute angles

_____ 69. triangle with one right angle

_____ 70. triangle with one obtuse angle

_____ 71. triangle with three congruent acute angles

_____ 72. triangle with three congruent sides

_____ 73. triangle with no congruent sides

_____ 74. triangle with at least two congruent sides

Chapter 5:

_____ 75. the same distance from two or more objects

_____ 76. a set of points that satisfies a given condition

_____ 77. three or more lines that intersect at one point

_____ 78. a point where 3 or more lines coincide {all intersect}

_____ 79. the point of concurrency of the 3 perp. bisectors of a triangle (aka: where the 3 perp. bisectors of a triangle intersect)

_____ 80. a segment whose endpoints are a vertex of the triangle and the midpoint of the opposite side

_____ 81. the point of concurrency of the three medians of a triangle (also known as the center of gravity)

_____ 82. a perpendicular segment from a vertex to the line containing the opposite side

_____ 83. the point of concurrency of the three altitudes of a triangle

_____ 84. a segment that joins the midpoints of two sides of the triangle

Chapter 6:

_____ 85. each segment that forms a polygon

_____ 86. the common endpoint of two sides

- _____ 87. a segment that connects any two nonconsecutive vertices
- _____ 88. a polygon that is both equilateral and equiangular [all sides are the same length and all angles are the same measure]
- _____ 89. a polygon in which a diagonal can be drawn such that part of the diagonal contains points in the exterior of the polygon
- _____ 90. a polygon in which no diagonal contains points in the exterior of the polygon
- _____ 91. a quadrilateral with two pairs of parallel sides
- _____ 92. quadrilateral with four right angles
- _____ 93. a quadrilateral with 4 congruent sides
- _____ 94. a quadrilateral with four right angles and four congruent sides
- _____ 95. a quadrilateral with exactly two pairs of congruent consecutive sides
- _____ 96. a quadrilateral with exactly one pair of parallel sides
- _____ 97. each of the parallel sides of a trapezoid
- _____ 98. the nonparallel sides of a trapezoid
- _____ 99. [*of a trapezoid*]: two consecutive angles whose common side is a base
- _____ 100. a trapezoid where the legs are congruent
- _____ 101. the segment whose endpoints are the midpoints of the legs
-

Chapter 1:

102 - 105: Write out the given notation in words.

- _____ 102. \overleftrightarrow{AB}
- _____ 103. \overrightarrow{AB}
- _____ 104. \overline{AB}
- _____ 105. AB

_____ 106. The intersection of two planes is a _____.

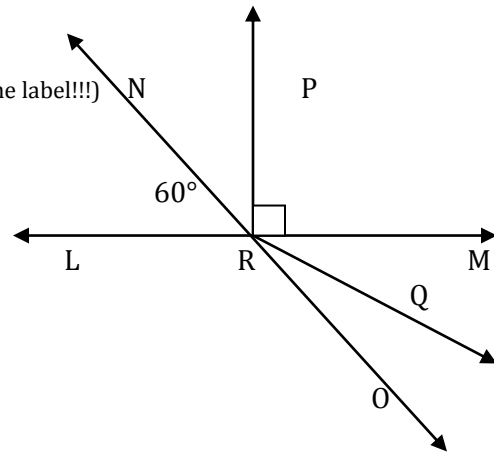
_____ 107. The intersection of a plane and a line is a _____.

108 & 109: In the diagram, \overrightarrow{RF} bisects $\angle MRO$.

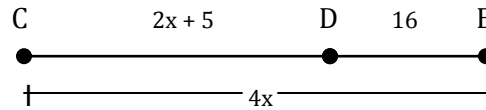
_____ 108. $m\angle NRP = \underline{\quad? \quad}$.

_____ 109. $m\angle LRO = \underline{\quad? \quad}$.

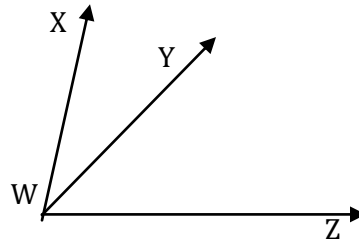
(number of degrees --don't forget the label!!!)



_____ 110. $CE = 4x$, $CD = 2x + 5$, and $DE = 16$.
Find the value of x . Show work.



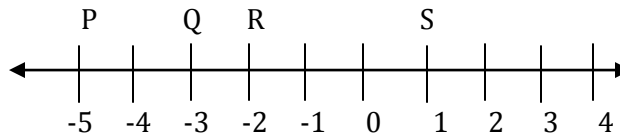
_____ 111. Find $m\angle XWZ$ if $m\angle YWZ = 44^\circ$
and $m\angle YWX = 25^\circ$.



112 & 113: Use the number line.

_____ 112. Find PR.

_____ 113. Find PS.



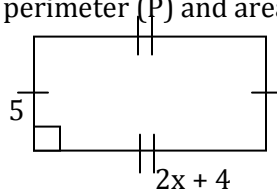
_____ 114. Find the measure of the complement of $\angle A$ where $m\angle A = 43^\circ$.

_____ 115. Find the measure of the supplement of $\angle T$ where $m\angle T = 52^\circ$.

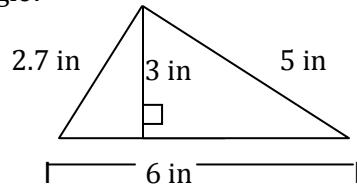
_____ 116. What is the perimeter of a square with sides that measure 9 cm?

$P = \underline{\hspace{2cm}}$ 117. Find the perimeter (P) and area (A) of the rectangle.

$A = \underline{\hspace{2cm}}$



_____ 118. What is the area of the triangle?



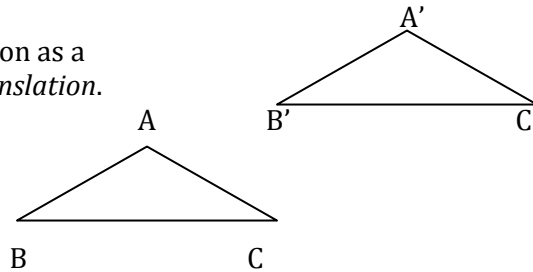
C = _____ 119. What is the circumference (C) and area (A) of a circle with radius 7 feet? Use the pi button on your calculator and round to the nearest tenth.

A = _____

_____ 120. What are the coordinates of the midpoint of \overline{GH} with endpoints G (-3, 7) and H (5, -1)?

_____ 121. What is the distance from X (-2, 5) to Y (6, -2)?

_____ 122. Identify the transformation as a *reflection, rotation, or translation*.



Chapter 2:

123 - 132: Choose the **best** answer. Please write in capital letters!

_____ 123. The depth of a pond is measured at the same location and on the same day every year for a number of years. The table below shows the measurements. If the pattern continued, what was the depth of the pond in 2007?

- A. 10 feet
- B. 8 feet
- C. 16 feet
- D. 2 feet

Depth of Pond

Year	Depth (in feet)
2003	30
2004	22
2005	16
2006	12

_____ 124. Find the next item in the pattern 4, 6, 8, 9, 10, ...

- A. 13
- B. 12
- C. 15
- D. 17

_____ 125. Complete the conjecture. The sum of two even numbers is ____.

- A. even
- B. odd
- C. sometimes odd, sometimes even
- D. even most of the time

_____ 126. The table shows the estimated population at BHS 14 years and over by age and sex according to Miss Beach's best estimate. Make a conjecture based on the data.

Population 18 Years and Over by Age and Sex			
	14 to 15 years	16 to 17 years	18 years and over
Girls	1,357	1,216	503
Guys	1,234	1,183	515

- A. Girls outnumbered guys in the 18 years and over population
- B. Guys outnumbered girls in the 18 years and over population
- C. There are more 18 years old and over in 2000 than in previous years.
- D. There are fewer 18 years old and over in 2000 than in previous years.

_____ 127. Show that the conjecture is false by finding a counterexample.

If $x > y$, then $x/y > 0$.

A. $x = 10, y = -4$

C. $x = 4, y = 10$

B. $x = 10, y = 4$

D. $x = -10, y = 4$

_____ 128. Identify the hypothesis and conclusion of the conditional statement.

If it is raining and sunny, then there is a rainbow.

A. Hypothesis: It is raining and sunny.

Conclusion: There is a rainbow.

B. Hypothesis: There is a rainbow.

Conclusion: It is raining and sunny.

C. Hypothesis: Sun makes rainbows.

Conclusion: Rain does not make clouds.

D. Hypothesis: Rain and sun happen together.

Conclusion: Rain and clouds do not happen together.

_____ 129. Write a conditional statement from the statement: A dog has 4 legs.

A. If it has 4 legs, then it is a dog.

B. Every dog has 4 legs.

C. If it is a dog, then it has 4 legs.

D. It has 4 legs and it is a dog.

_____ 130. Draw a conclusion from the given information.

Given: If two lines never intersect, then they are parallel.

If two lines are parallel, then they have the same slope.

Two lines never intersect.

A. Conclusion: The lines are parallel.

B. Conclusion: The lines are parallel, never intersect, and have the same slope.

C. Conclusion: The lines never intersect.

D. Conclusion: The lines have the same slope.

_____ 131. For the conditional statement, write the converse and biconditional statement.

If a figure is a rectangle with sides l and w , then $A = lw$.

A. Converse: If a figure is not a rectangle with sides l and w , then $A \neq lw$.

Biconditional: A figure is a rectangle with sides l and w if and only if $A = lw$.

B. Converse: If $A = lw$, then the figure is a rectangle with sides l and w .

Biconditional: A figure is a rectangle with sides l and w if and only if $A = lw$.

C. Converse: If $A \neq lw$, then the figure is not a rectangle with sides l and w .

Biconditional: A figure is not a rectangle with sides l and w if and only if $A \neq lw$.

D. Converse: If $A \neq lw$, then the figure is not a rectangle with sides l and w .

Biconditional: A figure is a rectangle with sides l and w if and only if $A = lw$.

_____ 132. Look at the work and solution to the equation $5x - 5 = 40$. Choose the missing justifications.

$$\begin{array}{r} 5x - 5 = 40 \\ + 5 \quad +5 \end{array}$$

Given

$$\frac{5x}{5} = \frac{45}{5}$$

_____?_____

$$x = 9$$

_____?_____

A. Substitution Property of Equality

Division Property of Equality

B. Addition Property of Equality

Division Property of Equality

C. Division Property of Equality

Subtraction Property of Equality

D. Addition Property of Equality

Reflexive Property of Equality

Chapter 3:

133 - 144: Identify the choice that best completes the statement or answers the question.

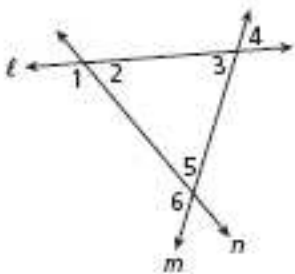
_____ 133. Determine whether the pair of lines $6x + y = 3$ and $2x + 3y = 1$ are parallel, intersect, or coincide.

A.) parallel

B.) intersect

C.) coincide

_____ 134. Identify the transversal and classify the angle pair $\angle 1$ and $\angle 3$.



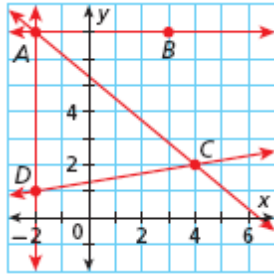
A.) The transversal is line l . The angles are corresponding angles.

B.) The transversal is line l . The angles are alternate interior angles.

C.) The transversal is line m . The angles are alternate exterior angles.

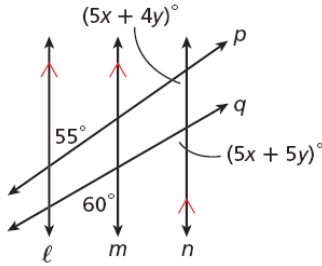
D.) The transversal is line n . The angles are same-side interior angles.

_____135. Use the slope formula to determine the slope of the line containing points A (-2, 7) and C (4, 2).



- A.) $-5/6$ C.) $6/5$
- B.) $-6/5$ D.) 0

_____136. Find x and y in the diagram.



- A.) $x = 5, y = 7$ C.) $x = -5, y = -7$
- B.) $x = 7, y = 5$ D.) $x = 2, y = 10$

_____137. Write the equation of the line with slope $3/5$ through the point (5, 2) in point-slope form.

- A.) $y = 3/5 (x - 2)$ C.) $y - 2 = 3/5 (x - 5)$
- B.) $y = 5/3 (x + 5)$ D.) $y - 5 = 3/5 (x - 2)$

_____138. Give an example of corresponding angles.



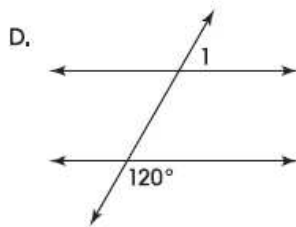
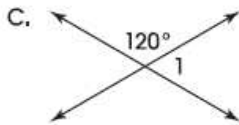
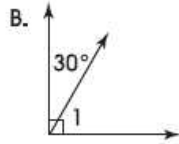
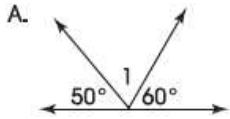
- A.) $\angle 1$ and $\angle 5$
- B.) $\angle 1$ and $\angle 7$
- C.) $\angle 3$ and $\angle 5$
- D.) $\angle 3$ and $\angle 6$

_____139. Both drive-thrus see the same number of people. How many drivers must both drive-thrus have before the total amount of money they have is equal?

	Taco Treats	Barry's Burgers
Starting money	\$16	\$24
Money per customer	\$6	\$2

- A.) 1 customer B.) 2 customers C.) \$28 D.) 20 cents

140. In which figure is the measure of $\angle 1$ **not** equal to 60° ?



141. The graph, as shown, represents the amount of money Sarah can earn at her part-time job.



- A. $y = 4x$
- B. $y = 6.5x$
- C. $y = 4x + 10$
- D. $y = 6.5x + 10$

Which of the following equations best represents the relationship between Sarah's pay and the hours she works?

142. For every lawn that he mows, Chris charges \$10 per hour for every hour that he works. For each lawn that she mows, Renee charges a fixed fee of \$22 and an additional \$4 for every hour that she works.

What is the fewest number of hours that both could work so that Chris's total pay for a lawn will be greater than Renee's?

- A.) 1 hour
- B.) 100 hours
- C.) 4 hours
- D.) 3 hours

_____ 143. The table below shows values for x and y.

Which of these equations represents the relationship between x and y?

- A.) $y = -2x + 1$
- B.) $y = 3x$
- C.) $y = 0$
- D.) $y = 2x - 1$

x	y
0	-1
1	1
2	3
3	5
4	7
5	9

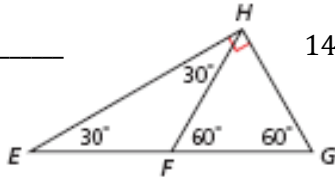
_____ 144. Which pair of equations represents lines that are parallel and perpendicular, respectively, to the graph of $y = -2/3 x + 2$?

- A.) $y = -2/3 x - 1$ and $y = 3/2 x + 3$
- B.) $y = 2/3 x - 1$ and $y = 3/2 x + 3$
- C.) $y = -2/3 x - 1$ and $y = -3/2 x + 3$
- D.) $y = 3/2 x + 1$ and $y = 2/3 x + 1$

Chapter 4:

#145 & 146: Classify the triangle by angle measures. {Choices: acute, right, obtuse, equiangular}

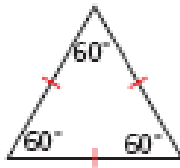
145. $\triangle EHG$ _____



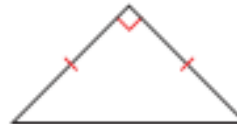
146. $\triangle FGH$ _____

#147 & 148: Classify the triangle by side lengths. {Choices: isosceles, scalene, equilateral}

147. _____



148. _____



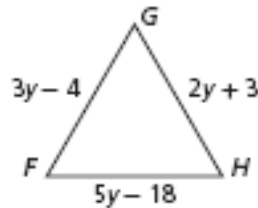
149. Using the measurements in the picture, find y and find all 3 side lengths of this equilateral triangle.

y = _____

FG = _____

GH = _____

FH = _____



150. The three angle measures in a triangle add to _____°.

151. In a right triangle, the other two angles add to _____°.

152. In an equiangular triangle, each angle is _____°.

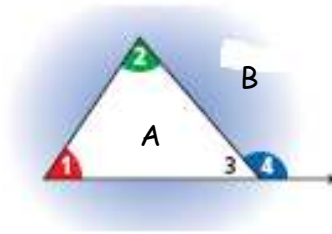
#153 - 156: Write the part labeled in the picture. {Choices: exterior, interior, remote interior angles, exterior angle}

153. (A) _____

154. (B) _____

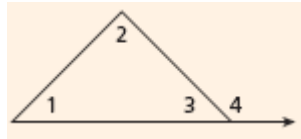
155. (1 & 2) _____

156. (4) _____

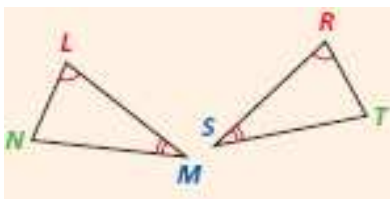


157. Fill-in-the-blanks:

$$m\angle \underline{\quad} = m\angle \underline{\quad} + m\angle \underline{\quad}$$



158.



Fill-in-the-blanks:

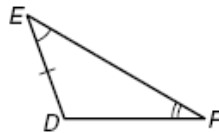
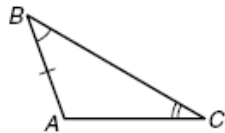
If $\angle L \cong \angle \underline{\quad}$ and $\angle M \cong \angle \underline{\quad}$,

then $\angle \underline{\quad} \cong \angle \underline{\quad}$.

159. List all congruent corresponding sides.

List all congruent corresponding angles.

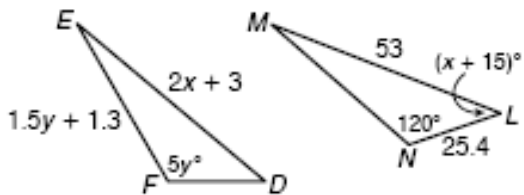
_____ \cong _____
 _____ \cong _____
 _____ \cong _____



_____ \cong _____
 _____ \cong _____
 _____ \cong _____

160. Given: $\triangle DEF \cong \triangle LMN$. Find the value of x.

x = _____

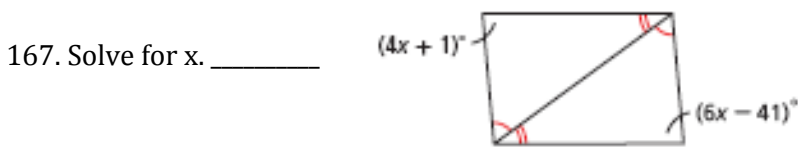
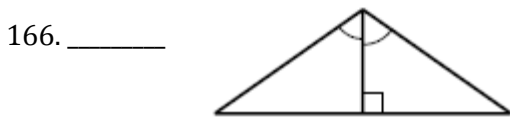
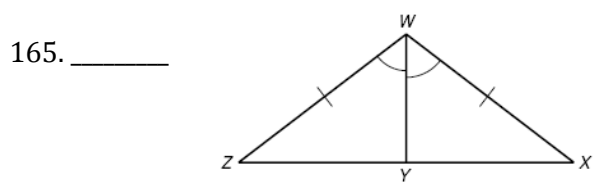
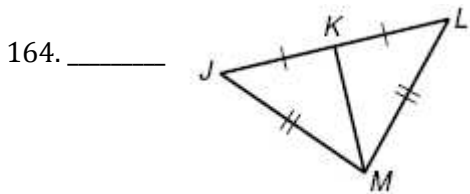
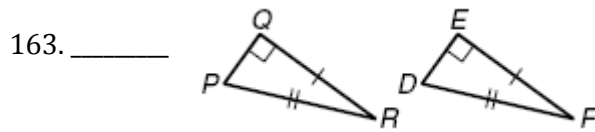
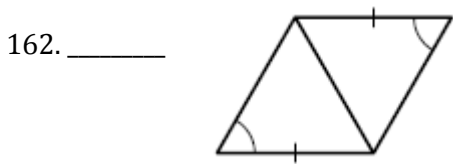


161. The letters in the triangle congruence theorems are abbreviating what words?

→ ASA:

→ HL:

#162 - 166: Write the reason that can be used to prove the two triangles congruent. If there is more than one way possible, list all possibilities. If congruence cannot be determined, write none. {Choices: ASA, SAS, SSS, HL}



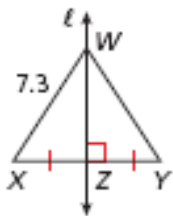
168. If a triangle is _____, then it is _____.
 hints → (3 equal sides) (3 equal angles)

If a triangle is _____, then it is _____.

Chapter 5:

169 - 171 [5-1] Find the length or angle measure that is asked for.

169. WY = _____

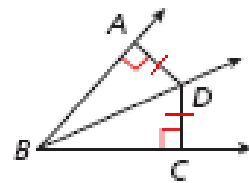


170. ML = _____



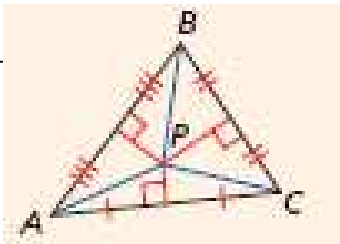
171. $m\angle ABD$, given that $m\angle ABC = 46^\circ$

$m\angle ABD =$ _____

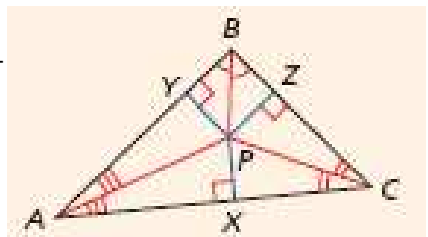


#172 & 173: [5-2] Fill-in-the-blanks with the segment lengths that are equal to the one already given.

172. PA = _____ = _____



173. PX = _____ = _____

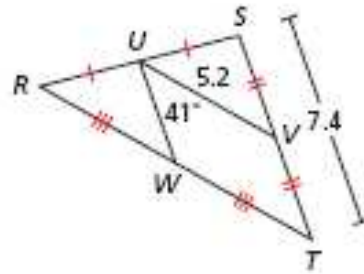


174. [5-4] Find each length or measure. Segments UV and UW are midsegments.

RT = _____

UW = _____

$m\angle UVS =$ _____

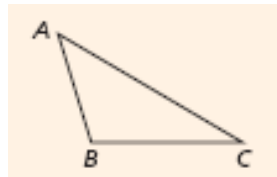


175. [5-5] Fill-in-the-blanks with the proper side of the triangle.

$AB + BC >$ _____

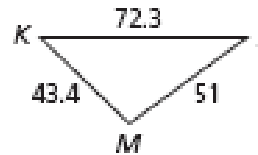
$BC + AC >$ _____

$AC + AB >$ _____



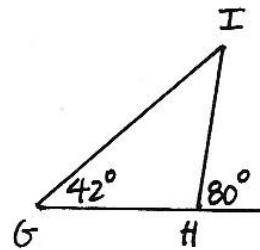
176. [5-5] Write the angles in order from smallest to largest.

_____, _____, _____



177. [5-5] Write the sides in order from shortest to longest.

_____, _____, _____



_____ 178. [5-5] Tell whether a triangle can have sides with the given lengths (yes or no.) 6.2, 8.1, 14.2

_____ 179. [5-5] Tell whether a triangle can have sides with the given lengths (yes or no.) 1, 5, 7

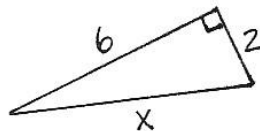
180. Two sides of a triangle have lengths 19 and 28. The third side must be greater than ? and less than ?. [5-5]

_____ greater than

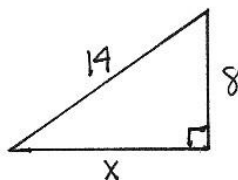
_____ less than

#181 & 182 [5-7] Use the Pythagorean Theorem to find the length of the third side. Show work.

181. $x =$ _____



182. $x =$ _____



#183 - 185: [5-7] Classify each triangle with the given side lengths as *acute*, *right*, or *obtuse*. Show work.

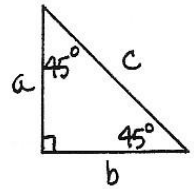
_____ 183. 9, 12, 16

_____ 184. 15, 36, 39

_____ 185. 20, 37, 41

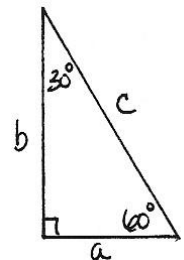
#186 - 188: [5-8] Use the 45-45-90 triangle shown to fill in the chart. Show work below for #188.

	186.	187.	188.
a	8		
b			
c		$3\sqrt{2}$	10



189 - 192: [5-8] Use the 30-60-90 triangle shown to fill in the chart. Show work to the right for #192.

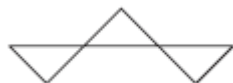
	189.	190.	191.	192.
a			13	
b		$5\sqrt{3}$		10
c	6			



Chapter 6:

193 & 194: Tell whether each figure is a polygon. If it is a polygon, name it by the number of its sides. {6-1, Ex. 1}

193. _____



194. _____



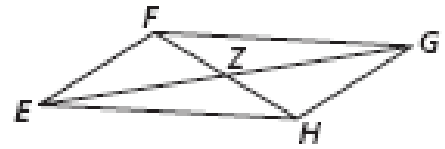
195. _____ Find the sum of the interior angle measures of a convex nonagon. {6-1, Ex. 3, A}

196. _____ Find the measure of each exterior angle of a regular 15-gon. {6-1, Ex. 4, A}

197. In $\square EFGH$, $EH = 28$, $HZ = 9$, and $m\angle EHG = 145^\circ$. Find FH and $m\angle FEH$. {6-2, Ex. 1}

_____ = FH

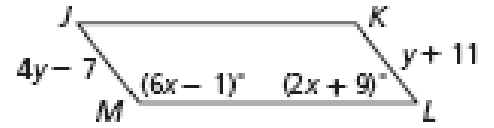
_____ = $m\angle FEH$



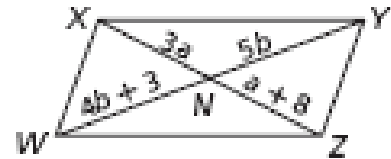
198. JKLM is a parallelogram. Find KL and $m\angle L$. {6-2, Ex. 1}

_____ = KL

_____ = $m\angle L$



199. Show that WXYZ is a parallelogram for $a = 4$ and $b = 3$. {like 6-3, Ex. 1}



200. Use the diagonals to determine whether a parallelogram with the given vertices is a rectangle, rhombus, or square. Give all the names that apply. Show work. {6-5, Ex. 3}

_____ A (-5, 7), C (3, 6), E (7, -1), G (-1, 0)

201. _____ Find HR . {6-6, Ex. 5, B}



Chapter 7:

202 & 203: Solve for x . Do not write your answers as decimals...leave in reduced fraction form. {7-1, Ex. 3}

_____ 202. $\frac{3}{8} = \frac{4}{x}$

_____ 203. $\frac{x-10}{x} = \frac{4}{9}$

_____ 204. The ratio of the angle measures in a triangle is 4 : 9 : 11. What is the measure of the largest angle? {7-1, Ex. 2}

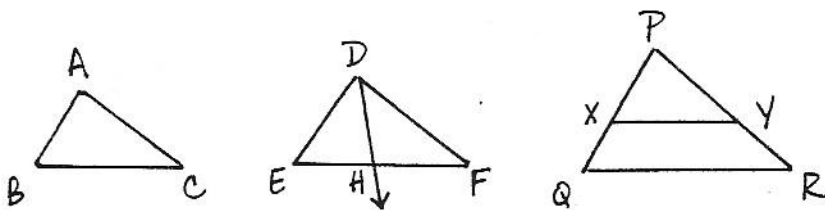
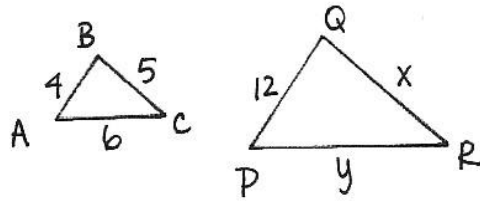
_____ 205. Given that $3x = 7y$, find the ratio of $\frac{x}{y}$ in simplest form. {7-1, Ex. 4}

206. Find the scale factor of each pair of similar triangles. (Always divide the first/top triangle by the second/bottom triangle.) Then find the values of x and y. {7-2}

Scale factor = _____

x = _____

y = _____



207 - 209: Use the pictures above to write the reason why the triangles are similar. {7-3}

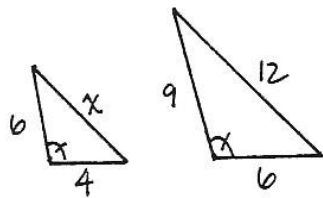
207. _____ If $m\angle B = 60$, $m\angle C = 40$, $m\angle E = 60$, and $m\angle F = 40$, then $\triangle ABC \sim \triangle DEF$.

208. _____ If $\frac{AB}{PQ} = \frac{AC}{PR} = \frac{BC}{QR}$, then $\triangle ABC \sim \triangle PQR$.

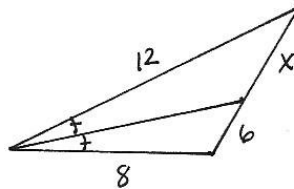
209. _____ If $\frac{DE}{PQ} = \frac{EF}{QR}$ and $\angle E \cong \angle Q$, then $\triangle DEF \sim \triangle PQR$.

210 & 211: Find the value of x. {7-4}

_____ 210.



_____ 211.



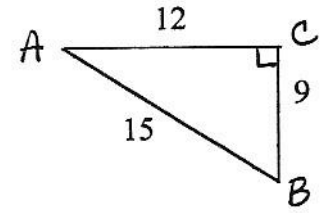
Chapter 8:

212. Write the sin, cos and tan of each angle as a fraction in simplest form.

$\tan A =$ $\cos A =$

$\tan B =$ $\sin B =$

$\sin A =$ $\cos B =$



#213 - 215: Find the trig value using a calculator or the trig chart. Round to 4 decimal places.

213. $\sin 32 =$

214. $\cos 49 =$

215. $\tan 35 =$

#216 - 218: Find the measure of each angle using a calculator or the trig chart. Round to the nearest whole degree.

216. $\sin A = 0.7245$

217. $\cos B = 0.2493$

218. $\tan C = 9.4618$

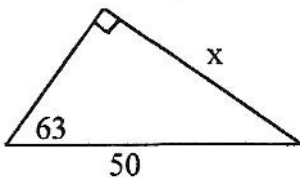
$A =$

$B =$

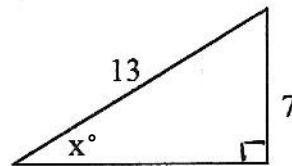
$C =$

#219 - 221: Find the value of x. Show the equation (which will include sin, cos or tan) used to find your answer. Then show your work to solve the equation. Round your answers to the *nearest tenth* for lengths or to the *nearest degree* for angles.

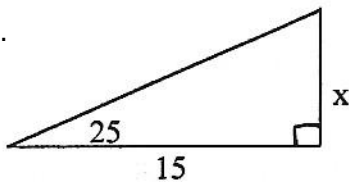
219.



220.

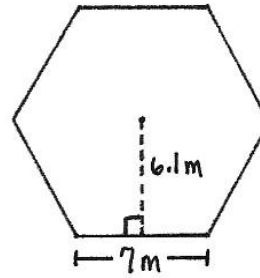


221.



Chapter 9:

_____ 222. Find the area of the REGULAR HEXAGON.



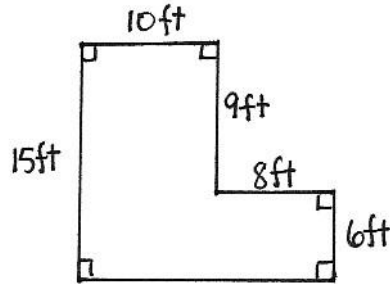
_____ 223. If the ratio of the perimeters of two similar triangles is $\frac{3}{4}$, then what is the ratio of the areas?

_____ 224. If the ratio of the areas of two similar rectangles is $\frac{100}{81}$, then what is the ratio of the perimeters?

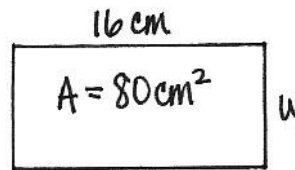
225. Find the PERIMETER AND AREA of the composite figure. Remember to label your answers.

P = _____

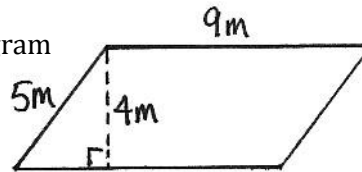
A = _____



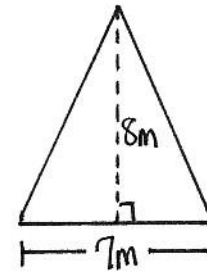
w = _____ 226. Find the width of the rectangle.



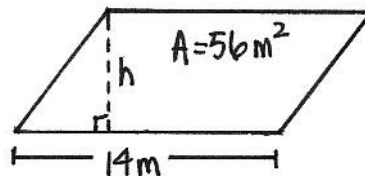
A = _____ 227. Find the area of the parallelogram



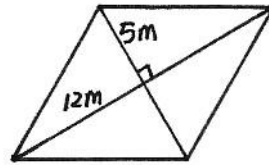
A = _____ 228. Find the area of the triangle.



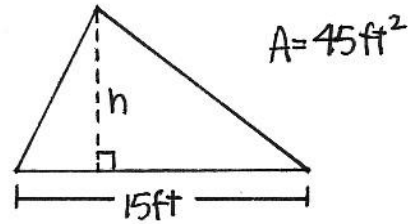
h = _____ 229. Find the height of the parallelogram.



A = _____ 230. Find the area of the rhombus.



h = _____ 231. Find the height of the triangle.

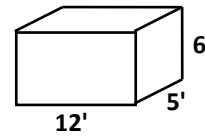


232. Find the lateral area (LA), surface area (SA) and volume (V) of the right rectangular prism. Consider the bases of the prism as the bottom and top of the "box." Show your work.

LA = _____

SA = _____

V = _____

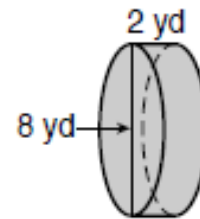


233. Find the lateral area (LA), surface area (SA) and volume (V) of the cylinder. Show your work.

LA = _____

SA = _____

V = _____

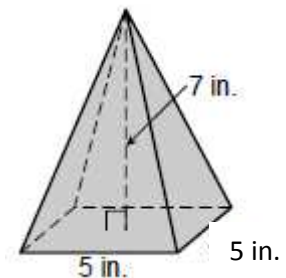


234. Find the lateral area (LA), surface area (SA) and volume (V) of the pyramid. Show your work.

LA = _____

SA = _____

V = _____



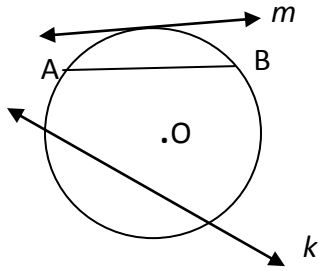
Chapter 11:

235. Identify each line or segment that intersects each circle. {11-1}

chord: _____

tangent: _____

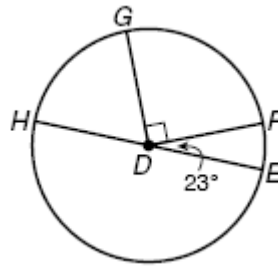
secant: _____



236 & 237: Find each measure. {11-2}

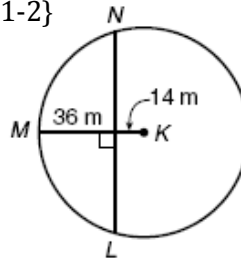
236. $\widehat{GH} =$ _____

237. $\widehat{FEH} =$ _____



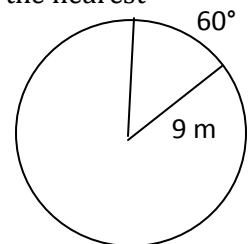
238. Find each length to the nearest tenth. Show work. {11-2}

LN = _____



_____ 239. Find the area of a sector with a radius of 5 mm and an arc measuring 72° . Give your answer in terms of π and rounded to the nearest hundredth. {11-3}

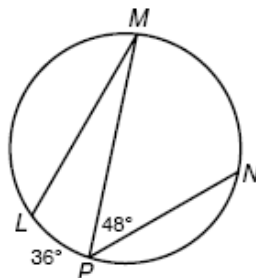
_____ 240. Find the arc length. Give your answer in terms of π and rounded to the nearest hundredth. {11-3}



#241 & 242: Find each measure. {11-4}

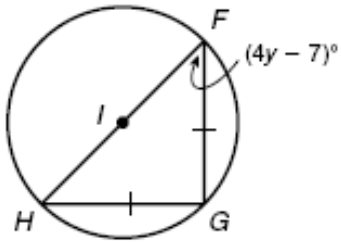
241.) $m\angle LMP =$ _____

242.) $m\widehat{MN} =$ _____

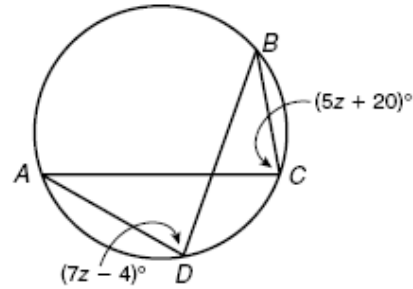


#243 & 244: Find each value. {11-4}

243. $y =$ _____



244. $z =$ _____



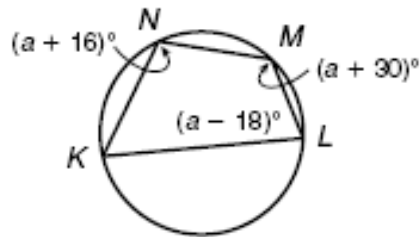
245. Find the angle measures of the inscribed quadrilateral. Show work. {11-4}

$m\angle K =$ _____

$m\angle L =$ _____

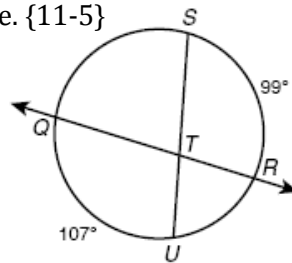
$m\angle M =$ _____

$m\angle N =$ _____

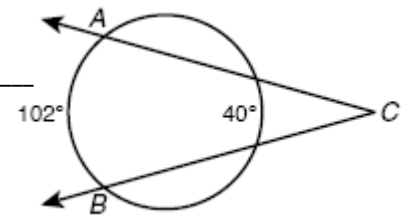


246 & 247: Find each measure. {11-5}

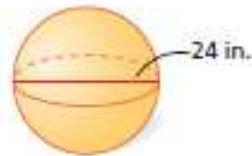
246. $m\angle STR =$ _____



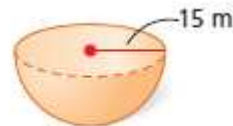
247. $m\angle ACB =$ _____



_____ 248. Find the surface area of the sphere. {Spheres}



_____ 249. Find the volume of the hemisphere. {Spheres}



_____ 250. Find the volume of a sphere with surface area 324π in². {Spheres}