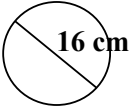


Geometry Unit 1-9 Review

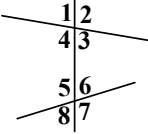
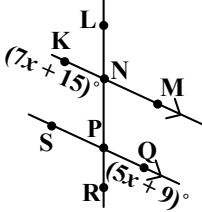
Unit 1

1.	The point (5, -3) lies on a circle whose equation is $(x + 1)^2 + (y + 11)^2 = r^2$. What is the radius of the circle?	3.	M is the midpoint of \overline{LN} . M has coordinates (2, -4) and L has coordinates (5, 3). What are the coordinates of N ?
2.	Determine the area. 		

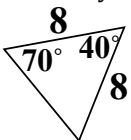
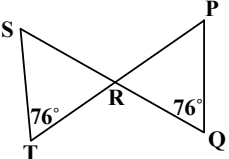
Unit 2

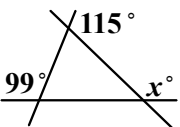
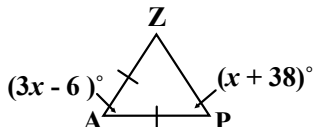

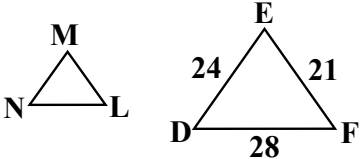
4.	Write the converse of the conditional statement. <i>"If a number is divisible by ten, then it is divisible by 5."</i> Is the converse True or False (if false, provide a counterexample)?	6.	Complete the proof. Given: R is the midpoint of segment QS . $QR = 3x + 6$ and $RS = 6x - 3$ Prove: $QS = 30$ <table border="1" data-bbox="889 701 1482 1182"> <tr><td>$QR = 3x + 6$</td><td>[?]</td></tr> <tr><td>$RS = 6x - 3$</td><td>[?]</td></tr> <tr><td>$\overline{QR} \cong \overline{RS}$</td><td>[?]</td></tr> <tr><td>$QR = RS$</td><td>[?]</td></tr> <tr><td>$3x + 6 = 6x - 3$</td><td>[?]</td></tr> <tr><td>$6 = 3x - 3$</td><td>[?]</td></tr> <tr><td>$9 = 3x$</td><td>[?]</td></tr> <tr><td>$3 = x$</td><td>[?]</td></tr> <tr><td>$x = 3$</td><td>[?]</td></tr> <tr><td>$QR + RS = QS$</td><td>[?]</td></tr> <tr><td>$3x + 6 + 6x - 3 = QS$</td><td>[?]</td></tr> <tr><td>$9x + 3 = QS$</td><td>[?]</td></tr> <tr><td>$9(3) + 3 = QS$</td><td>[?]</td></tr> <tr><td>$30 = QS$</td><td>[?]</td></tr> <tr><td>$QS = 30$</td><td>[?]</td></tr> </table>	$QR = 3x + 6$	[?]	$RS = 6x - 3$	[?]	$\overline{QR} \cong \overline{RS}$	[?]	$QR = RS$	[?]	$3x + 6 = 6x - 3$	[?]	$6 = 3x - 3$	[?]	$9 = 3x$	[?]	$3 = x$	[?]	$x = 3$	[?]	$QR + RS = QS$	[?]	$3x + 6 + 6x - 3 = QS$	[?]	$9x + 3 = QS$	[?]	$9(3) + 3 = QS$	[?]	$30 = QS$	[?]	$QS = 30$	[?]
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5.	Provide a counter-example. <i>"If a triangle is not equilateral, then it is obtuse."</i>																																

Unit 3

7.	Identify the angle that is same side interior to $\angle 6$. 	8.	Find $m\angle NPQ$. 
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Units 4 & 7

9.	Classify the triangle below by its sides and angles. 	10.	What postulate or theorem will prove that $\triangle STR \cong \triangle PQR$? 
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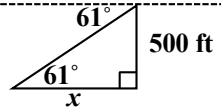
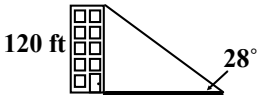
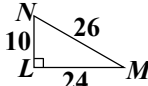
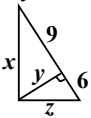
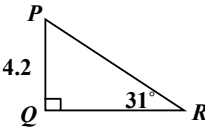
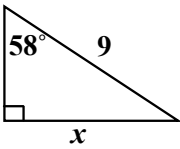
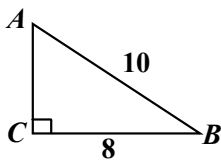
11. Determine the value of x . 	13. Determine $m\angle Z$. 
12. The triangle below is equiangular. Determine the length of each of its sides. 	14. $\triangle DEF \sim \triangle LMN$. If the similarity ratio is $\frac{7}{4}$, what is MN ? 

15. Complete the proof. Given: $\triangle ABC \cong \triangle LMN$, $m\angle A = 72^\circ$ Prove: $m\angle L = 72^\circ$ Proof: <table border="1" data-bbox="219 766 1477 903"> <tr> <td>1. $\triangle ABC \cong \triangle LMN$, $m\angle A = 72^\circ$</td> <td>1. Given</td> </tr> <tr> <td>2. $\angle A \cong \angle L$</td> <td>2. [?]</td> </tr> <tr> <td>3. $m\angle A = m\angle L$</td> <td>3. Definition of Congruence</td> </tr> <tr> <td>4. $m\angle L = 72^\circ$</td> <td>4. Substitution Property of Equality</td> </tr> </table> <p>A. Definition of Congruence B. Substitution C. CPCTC D. Reflexive Property of Equality</p>	1. $\triangle ABC \cong \triangle LMN$, $m\angle A = 72^\circ$	1. Given	2. $\angle A \cong \angle L$	2. [?]	3. $m\angle A = m\angle L$	3. Definition of Congruence	4. $m\angle L = 72^\circ$	4. Substitution Property of Equality
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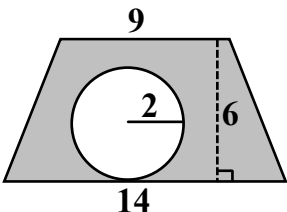
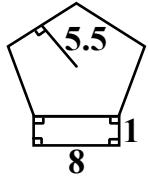
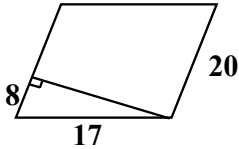
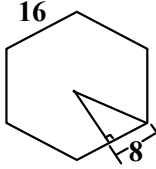
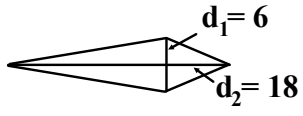
Unit 6

16. What is the difference between a trapezoid and a parallelogram?	17. How is a kite different from a rhombus? How are they alike?
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Unit 8

18. A ranger spots a fire from the top of a watchtower that is 500 ft tall. If the angle of depression from the top of the watchtower to the fire is 61° , what is the horizontal distance between them? Round to the nearest foot. 	22. Approximately how long is the building's shadow (round to the nearest tenth)? 
19. Use a special right triangle to write $\tan 60$ as a fraction.	23. Write the trigonometric ratio for $\tan N$ as a fraction. 
20. Determine the value of y . 	24. Determine the length of PR . Round to the nearest hundredth. 
21. Write the trigonometric ratio and solve for x . 	25. In the given triangle, $AB = 10$ and $BC = 8$. Determine $\tan A$. 

Unit 9

<p>26.</p>	<p>Find the shaded area. Leave your answer in terms of π.</p> 	<p>29.</p>	<p>Determine the area of the composite figure.</p> 
<p>27.</p>	<p>Determine the area of the parallelogram.</p>  <p><i>Hint: Use the Pythagorean theorem on the small right triangle to find the height.</i></p>	<p>30.</p>	<p>The regular hexagon has a side length of 16. Determine its area.</p>  <p><i>Hint: Use special right triangles to determine the apothem—the center of this hexagon has 360° total. If you break it up into 12 equal right triangles (2 triangles for every side), you have a 30-60-90 triangle (the center angle is 30°).</i></p>
<p>28.</p>	<p>Determine the area of the kite.</p> 	<p>31.</p>	<p>Determine the area of the trapezoid.</p> 