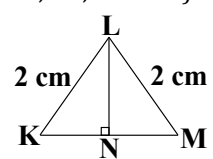
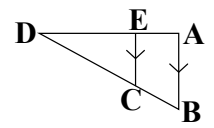
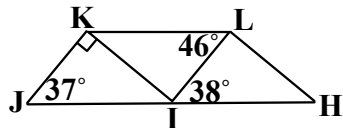
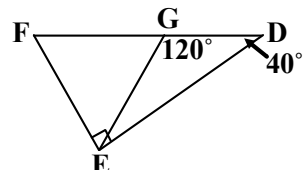
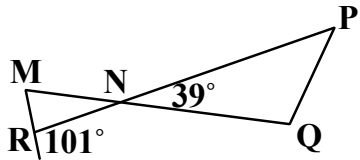
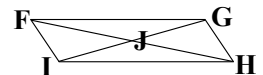
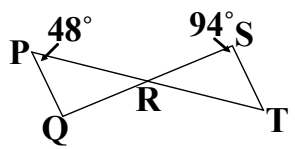
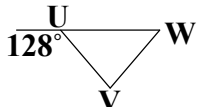
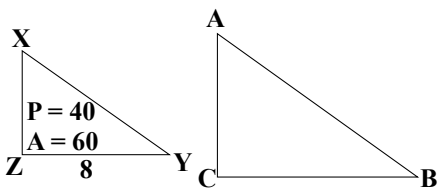
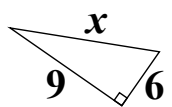


Looking Ahead: Geometry Units 4 & 7

The questions below are examples of the type of questions you'll see on your **Semester 1 Final**, and the **Semester 2 Final**. This is how these tests will ask you to apply your skills from **Units 4 & 7**, as well as your common sense math skills. They are structured in a way that is deliberately complicated, but the skills are the same as what you have learned up to this point.

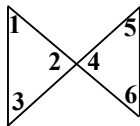
Semester 1 Final Examples

<p>1.</p>	<p>$\triangle KLM$ and $\triangle XYZ$ are two triangles such that</p> $\frac{LM}{YZ} = \frac{KM}{XZ}$ <p>a. What angles would have to be congruent in order to prove the triangles are similar?</p> <p>b. What sides would have to be similar in order to prove the sides are similar?</p>	<p>8.</p>	<p>Given the lengths marked on the figure and that $\angle KNL$ is a right angle, what postulate or theorem, if any, can be used to prove that $\triangle KNL \cong \triangle MNL$? (SSS, SAS, AAS, ASA, HL, or none)</p> 
<p>2.</p>	<p>What makes $\triangle ABD$ similar to $\triangle ECD$?</p> 	<p>9.</p>	<p>Simone folded a triangular sheet of paper into the shape shown. Find $m\angle LHI$.</p> 
<p>3.</p>	<p>Classify $\triangle FGE$ by its angle measures, given $m\angle DGE = 120^\circ$, $m\angle EDG = 40^\circ$, and $m\angle FED = 90^\circ$.</p> 	<p>10.</p>	<p>What is $m\angle NMR$?</p> 
<p>4.</p>	<p>If $\triangle FJI \cong \triangle HJG$, then $\angle FJI \cong ?$</p> 	<p>11.</p>	<p>What type of triangle is formed by the points $S(-3, 5)$, $T(3, 7)$, and $U(5, 13)$? (right, equilateral, isosceles, or scalene)</p>
<p>5.</p>	<p>Given that $\triangle PQR \cong \triangle TSR$, $m\angle P = 48^\circ$, and $m\angle S = 94^\circ$, find $m\angle PRQ$.</p> 	<p>12.</p>	<p>The lengths of two sides of a triangle are 3 inches and 9 inches. Find the range of possibilities for the third side, s.</p>
<p>6.</p>	<p>$\triangle UVW$ is an isosceles triangle with vertex $\angle V$. $m\angle V = ?$</p> 	<p>13.</p>	<p>a. Are all scalene triangles similar? b. Are all isosceles triangles similar? c. Are all equilateral triangles similar? d. Are all acute triangles similar? e. Are all obtuse triangles similar? f. Are all right triangles similar?</p>
<p>7.</p>	<p>Given $\triangle XYZ \cong \triangle ABC$, find the area of $\triangle ABC$.</p> 	<p>14.</p>	<p>Find the value of x. Express your answer in simplest radical form.</p> 

15. Complete the following proof.

Given: $m\angle 1 = m\angle 6$

Prove: $m\angle 3 = m\angle 5$



Proof:

Statements	Reasons
1. $m\angle 1 = m\angle 6$	1. Given
2. $m\angle 1 + m\angle 2 + m\angle 3 = 180^\circ$ $m\angle 4 + m\angle 5 + m\angle 6 = 180^\circ$	2. Triangle Sum Theorem
3. $m\angle 1 + m\angle 2 + m\angle 3 = m\angle 4 + m\angle 5 + m\angle 6$	3. Substitution Property of Equality
4. $\angle 2 \cong \angle 4$	4. [?]
5. $m\angle 2 = m\angle 4$	5. Definition of Congruence
6. $m\angle 6 + m\angle 4 + m\angle 3 = m\angle 4 + m\angle 5 + m\angle 6$	6. Substitution Property of Equality
7. $m\angle 3 = m\angle 5$	7. Subtraction Property of Equality

Semester 2 Final Examples

16. Classify the triangle below by its sides and angles.	19. What postulate or theorem will prove that $\triangle STW \cong \triangle VTW$?
17. Determine the value of x .	20. Determine $m\angle Z$.
18. The triangle below is equiangular. Determine the length of each of its sides.	21. $\triangle DEF \sim \triangle LMN$. If the similarity ratio is $\frac{5}{3}$, what is MN ?

22. Complete the proof.
Given: $\triangle PQR \cong \triangle STV$, $m\angle P = 30^\circ$
Prove: $m\angle S = 30^\circ$

Proof:

1. $\triangle PQR \cong \triangle STV$, $m\angle P = 30^\circ$	1. Given
2. $\angle P \cong \angle S$	2. [?]
3. $m\angle P = m\angle S$	3. Definition of Congruence
4. $m\angle S = 30^\circ$	4. Substitution Property of Equality

A. Definition of Congruence B. Substitution C. CPCTC D. Reflexive Property of Equality