

Unit 4 Review – Triangle Relationships

Figures are not drawn to scale

Step 1: Add the three angles of the triangle to equal 180.

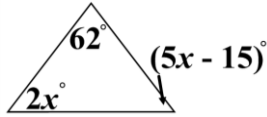
Step 2: Simplify.

Step 3: Add or subtract the constant (number without an x) to move it to the other side of the equation.

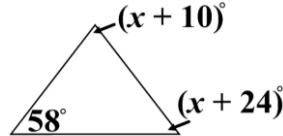
Step 4: Divide by the coefficient (the number in front of x).

Step 5: Substitute.

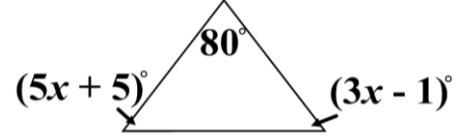
1. Determine the value of x , and use it to evaluate each given angle measure.



2. Determine the value of x , and use it to evaluate each given angle measure.



3. Determine the value of x , and use it to evaluate each given angle measure.

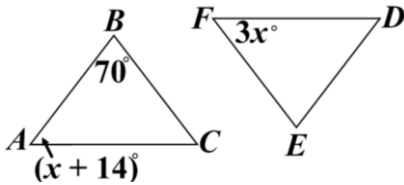


Step 1: Determine which angles are congruent based on the statement, not the picture!

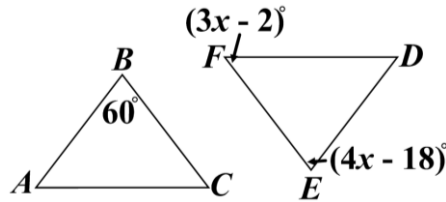
Step 2: If you have two angles with information that are congruent to each other, set them equal.

However, if none of the marked angles are congruent to each other, then add the three angle values to equal 180 and follow the steps for problems 1-3.

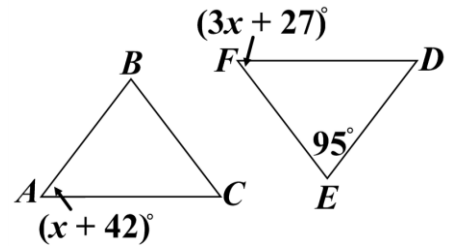
4. For the figure shown, $\triangle ABC \cong \triangle DEF$. Determine the value of x .



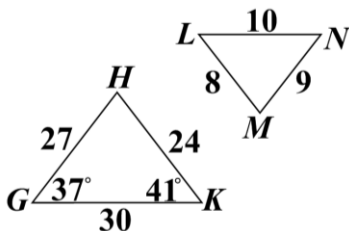
5. For the figure shown, $\triangle ABC \cong \triangle EDF$. Determine the value of x .



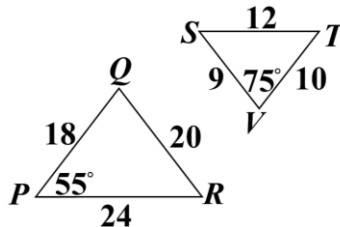
6. For the figure shown, $\triangle ABC \cong \triangle DFE$. Determine the value of x .



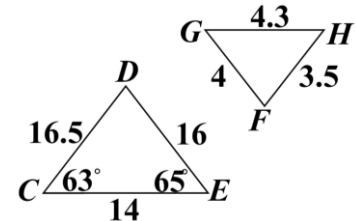
7. For the figure shown, $\triangle GHK \sim \triangle NML$. Determine the measure of $\angle M$.



8. For the figure shown, $\triangle PQR \sim \triangle SVT$. Determine the measure of $\angle R$.



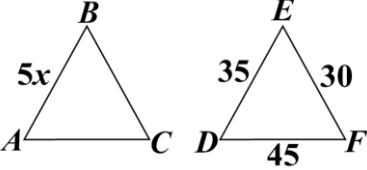
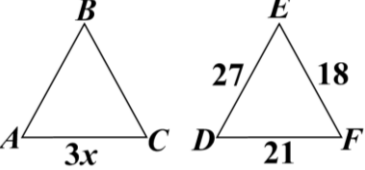
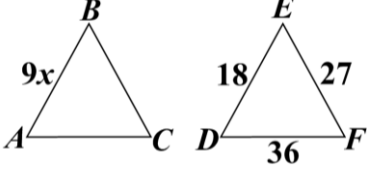
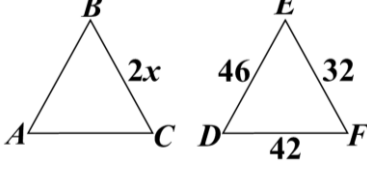
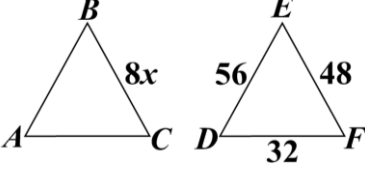
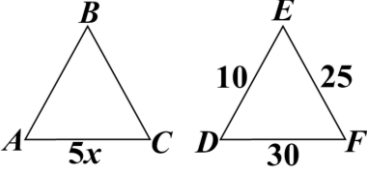
9. For the figure shown, $\triangle CDE \sim \triangle FGH$. Determine the measure of $\angle G$.



Step 1: Determine which sides are congruent based on the statement, not the picture!

Step 2: Set the congruent sides equal to each other.

Step 3: Solve for x.

<p>10. Find the value of x, given that $\triangle ABC \cong \triangle DEF$ (not drawn to scale).</p> 	<p>11. Find the value of x, given that $\triangle ABC \cong \triangle DFE$ (not drawn to scale).</p> 	<p>12. Find the value of x, given that $\triangle ABC \cong \triangle EFD$ (not drawn to scale).</p> 
<p>13. Find the value of x, given that $\triangle ABC \cong \triangle FED$ (not drawn to scale).</p> 	<p>14. Find the value of x, given that $\triangle ABC \cong \triangle EFD$ (not drawn to scale).</p> 	<p>15. Find the value of x, given that $\triangle ABC \cong \triangle FDE$ (not drawn to scale).</p> 

Unit 4 Review - Triangle Relationships Answers

1. $x = 19$; $2x^\circ = 38^\circ$; $(5x - 15)^\circ = 80^\circ$	2. $x = 44$; $(x + 10)^\circ = 54^\circ$; $(x + 24)^\circ = 68^\circ$	3. $x = 12$; $(5x + 5)^\circ = 65^\circ$; $(3x - 1)^\circ = 35^\circ$
4. $x = 24$	5. $x = 20$	6. $x = 4$
7. $m\angle M = 102^\circ$	8. $m\angle R = 50^\circ$	9. $m\angle G = 52^\circ$
10. $x = 7$	11. $x = 9$	12. $x = 3$
13. $x = 23$	14. $x = 4$	15. $x = 5$