Learning Objective(s) _____ :

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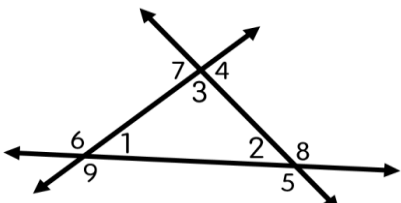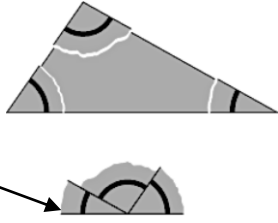| Main Ideas/ Questions	Notes
Triangle Vocabulary	**Triangle** – a _____-sided polygon
	Vertex (Vertices) – the point that connects _____ sides
	Adjacent side – two sides that share a common _____
	Opposite side – the side opposite a specified _____
Triangle Angle Characteristics	**Name** *a triangle by using a triangle symbol (Δ) and each vertex's letter.**
	A vertex, interior angles, B vertex, vertex C
	Potential Names:
	Triangle Sum Theorem
	3 Interior Angles = _____
	Exterior Angle Theorem
	Exterior Angles =
	2 _____ _____ angles
Examples	**Use the numbered angles diagram to answer the following questions.**
	1. If the $m\angle 2 = 67°$, what are the measures of $\angle 8$ and $\angle 5$?
	2. If the $m\angle 1 = 45°$ and $m\angle 3 = 65°$, what is the $m\angle 8$?
	3. If the $m\angle 7 = 100°$ and $m\angle 1 = 56°$, what is the $m\angle 2$?
	4. If the $m\angle 2 = 32°$ and $m\angle 3 = 78°$, what are the measures of $\angle 1$ and $\angle 6$?
	5. If the $m\angle 1 = 75°$ and $m\angle 4 = 105°$, what are the rest of the angle measures?

Main Ideas/ Questions	Notes
Equilateral Triangle Characteristics	**Equilateral Triangle** – a triangle with 3 congruent _____ and _____
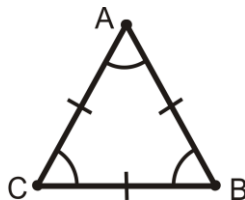
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| Isosceles Triangle Characteristics | **Isosceles Triangle** – a triangle with 2 congruent _____ and _____
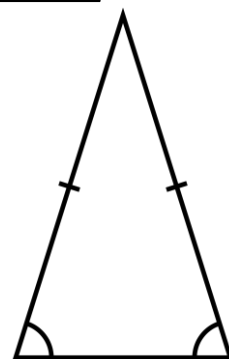
Legs – the congruent _____ of an isosceles triangle

Base – the _____ side of an isosceles triangle

Base Angles – the congruent angles opposite of the _____

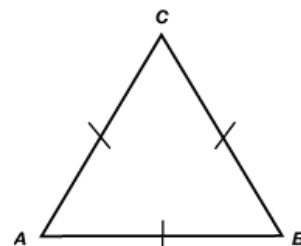**Isosceles Triangle Theorem** – If two sides of a triangle are congruent, then _____ _____

Converse of Isosceles Triangle Theorem – if two angles of a triangle are congruent, then _____ _____ |
| Examples | **Use the figure to the right to answers #1-2.**
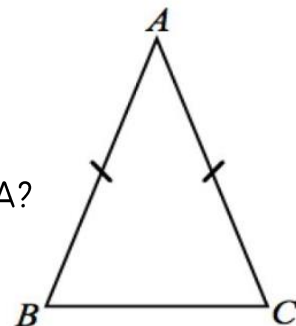1. If AB = 2x + 3 and AC = 3x − 7, solve for x?

2. If CB = -x + 7 and AC = 3x − 9, what is the length of AB?

Use the figure to the right to answers #3-4.
3. If the $m\angle A = 63°$, what is the $m\angle B$?

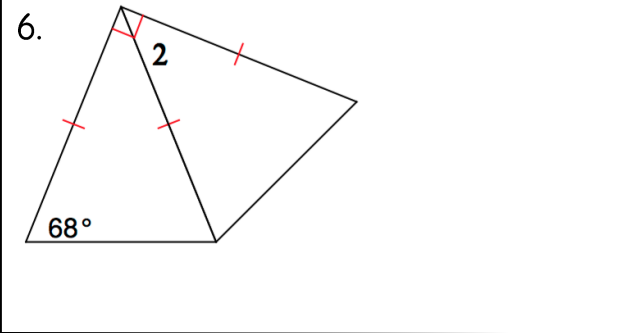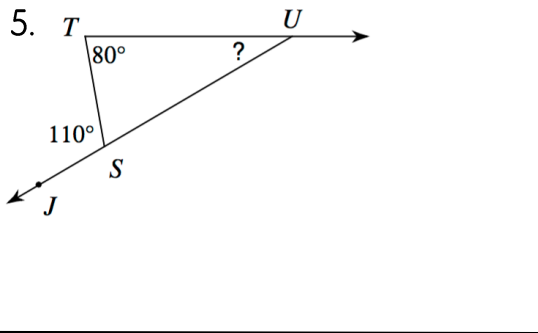4. If the $m\angle B = 3x + 5$ and the $m\angle C = 4x$, find the $m\angle A$? |
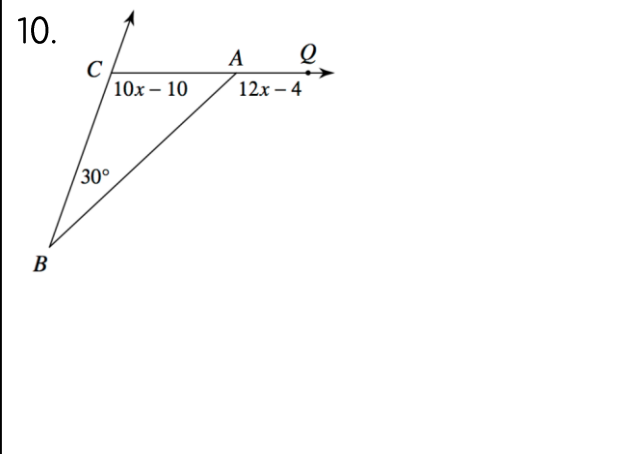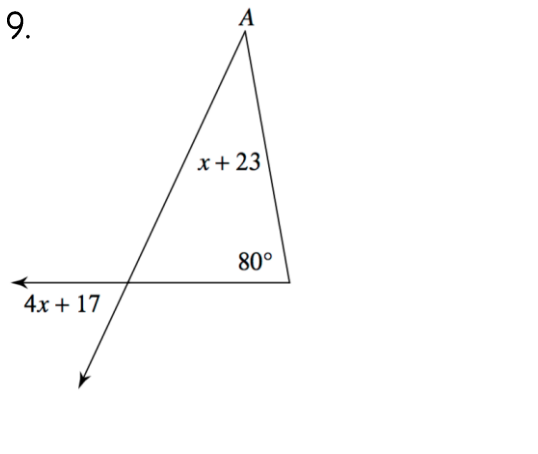
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Main Ideas/ Questions	Notes

Main Ideas/ Questions

Examples

Notes

Find the measure of the missing or numbered angle.

5.

T U
$80°$ $?$
$110°$
S
J

6.

2
$68°$

Find the value of all variables.

7. $m\angle 2 = x + 94$

2

$47°$

8.

$5x - 6$
$3x + 2$
$5y°$

9.

A
$x + 23$
$80°$
$4x + 17$

10.

C A Q
$10x - 10$ $12x - 4$
$30°$
B
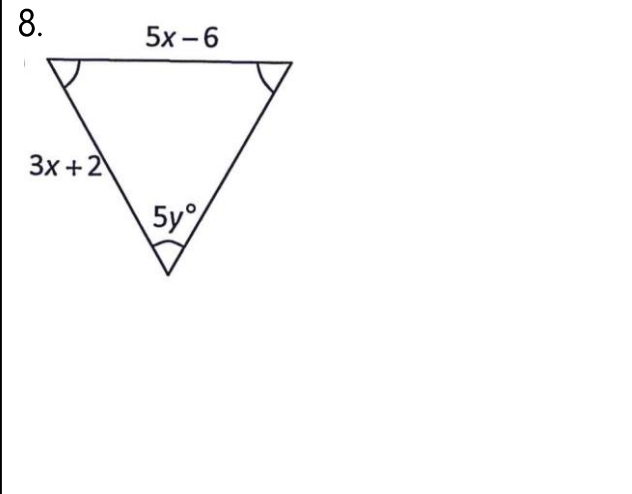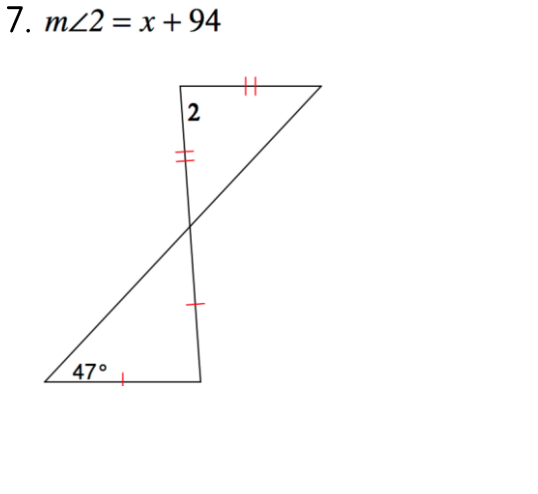
Summary

Summarize the lesson in your own words with the help of the guided questions.

What are the main characteristics about triangles? What are the main characteristics about equilateral and isosceles triangles?