Name: _____

Lesson 2: Triangle Definitions and Theorems

1) TRIANGLE DEFINITIONS AND THEOREMS

Classifying Triangles by Sides

Scalene – no equal sides
Isosceles – at least two sides equal
Equilateral – all three sides equal

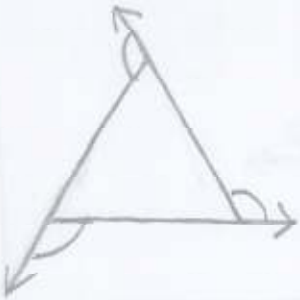
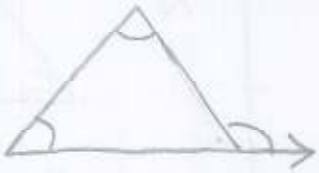
Classifying Triangles by Angles

Right – has one angle equal to 90°
Obtuse – has one angle greater than 90°
Acute – has all three angles less than 90°

Are the following types of triangles possible?

	Scalene	Isosceles	Equilateral
Right	✓	✓	×
Obtuse	✓	✓	×
Acute	✓	✓	✓

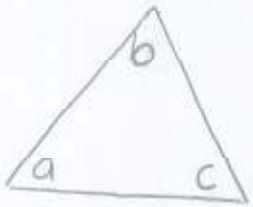
Angles in a Triangle

Interior Angles	Exterior Angles	Remote Angles
		

Name: _____

Sum of the Interior Angles of a Triangle Theorem (SATT)

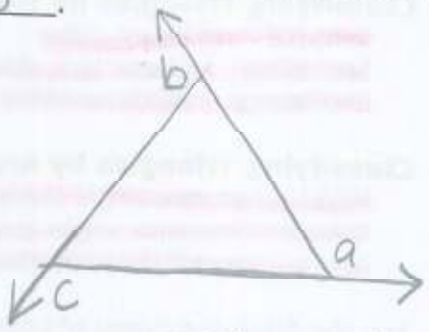
The sum of the interior angles of a triangle is 180°.



$a + b + c = 180°$

Sum of the Exterior Angles of a Triangle Theorem (SEAT)

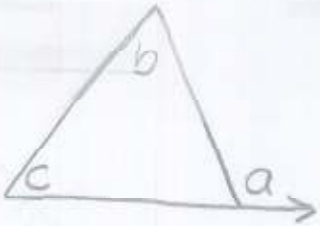
The sum of the exterior angles of a triangle is 360°.



$a + b + c = 360°$

Remote Exterior Angle of a Triangle Theorem (EAT)

The exterior angle of a triangle is equal to the sum of the two remote interior angles .



$a = b + c$

Isosceles Triangle Theorem (ITT)

In an isosceles triangle, the angles opposite the equal sides are equal.

$a = b$

If two angles in a triangle are equal, then the sides opposite the equal angles are equal and the triangle is _____.