**Properties of Triangles Notes Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

|  |  |  |
| --- | --- | --- |
| **Triangle** | **Sides** | **Angles** |
|  |  |  |
|  |  |  |
|  |  |  |

**Triangle Inequality Theorem:** The \_\_\_\_\_\_ of any two sides of a triangle must be \_\_\_\_\_\_\_\_\_\_ than the third side.

**Triangle Sum Theorem:** The sum of the interior angles of a triangle add up to \_\_\_\_\_\_\_\_\_\_o

|  |  |
| --- | --- |
| **Naming Triangles by their…** | |
| **SIDES** | **ANGLES** |
| **Equilateral:** 3 congruent sides | **Right**: contains one 90o angles |
| **Isosceles:** 2 congruent sides | **Acute:** contains 3 acute angles |
| **Scalene:** no congruent sides | **Obtuse:**  contains one obtuse angle |

**Determine if you make a triangle given the dimension. State why or why not.**

**1)** Side Measurements: 4cm, 6cm, 7cm Angle Measurements: 30o, 60o, 90o

**2)** Side Measurements: 5cm, 3cm, 10cm Angle Measurements: 35o, 65o, 80o

**3)** Side Measurements: 14cm, 6cm, 9cm Angle Measurements: 25o, 75o, 90o

**Classify each triangle by its sides and angles.**

|  |  |  |
| --- | --- | --- |
| **1)** | **2)** | **3)** |

**Pause the video and try these on your own!**

**Then press play and check your answers with a color pen**

**Determine if you make a triangle given the dimension. State why or why not.**

**1)** Side Measurements: 14cm, 10cm, 12cm Angle Measurements: 20o, 30o, 140o

**2)** Side Measurements: 5cm, 5cm, 7cm Angle Measurements: 45o, 45o, 90o

**3)** Side Measurements: 4cm, 6cm, 12cm Angle Measurements: 45o, 65o, 70o

**Classify each triangle by its sides and angles.**

|  |  |  |
| --- | --- | --- |
| **1)** | **2)** | **3)** |
| **4)** | **5)** | **6)** |

Diagrams from Kuta Software