| Exterior Angle Inequality | The measure of an exterior <br> angle of a triangle is greater <br> than the measure of either <br> of the corresponding <br> remote interior angles. | $\boldsymbol{m} \angle \mathbf{1}>\boldsymbol{m} \angle A$ <br> $\boldsymbol{m} \angle \mathbf{1}>\boldsymbol{m} \angle B$ |
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1. Use the Exterior Angle Inequality Theorem to list all of the angles that satisfy the stated condition below:
a. Measures less than $m \angle 7$
b. Measures greater than $m \angle 6$

2. Use the Exterior Angle Inequality Theorem to list all of the angles that satisfy the stated condition below:
a. Measures less than $m \angle 1$

b. Measures greater than $m \angle 8$

Angle-Side Inequalities:


|  | If one side of a triangle is <br> longer than another side, <br> then the angle opposite the <br> longer side has a greater <br> measure than the angle <br> opposite the shorter side |  |
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|  | If one angle of a triangle has <br> a greater measure than <br> another angle, then the side <br> opposite the greater angle is <br> longer than the side <br> opposite the lesser angle | $\boldsymbol{m}$ |

3. List the angles of $\triangle P Q R$ in order from smallest to largest.

4. List the angles and sides of $\triangle A B C$ in order from smallest to largest

5. List the sides of $\triangle F G H$ in order from shortest to longest.

6. List the angles and sides of $\triangle W X Y$ in order from smallest to largest.

