Classifying Triangles

1. Matching

A. ________ No Congruent Sides                              A. Equilateral Triangle
B. ________ Contains an angle greater than 90 degrees        B. Isosceles Triangle
C. ________ At least two congruent angles                    C. Scalene Triangle
D. ________ A triangle with three 60 degree angles          D. Obtuse Triangle

2. Can a triangle have more than one obtuse angle? Why or why not?

Triangle Sum Theorem

3a. Solve for x.

3b. Solve for x.
3c. Solve for $x$, $m$, $z$, and $y$.

Exterior Angle Theorem Solve for $x$

4a.

4b.
5. This is a(n) _____________________ triangle. Label all the sides and angles.

6. Solve for x and y.

7. Is $\triangle ABC \cong \triangle PQR$? Explain your reasoning.
8. Given $\triangle ABC \cong \triangle STU$

Find

$$m \angle T = \quad m \angle U =$$
$$m \angle C = \quad m \angle A =$$
$$\overline{AC} = \quad \overline{ST} =$$

![Diagram of $\triangle ABC$ and $\triangle STU$](image)

9. The sides of $\triangle ABD$ are proportional to the sides of $\triangle CBE$. First solve for $x$. Then find the measurement of $AC$.

![Diagram of $\triangle ABD$ and $\triangle CBE$](image)