Name: _____
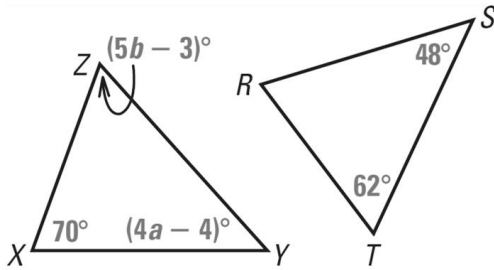
5.7 ~ CPCTC & Circles
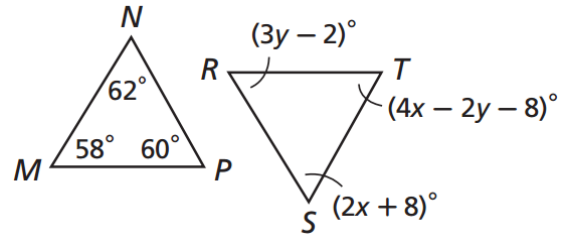
Past due on: _____ Period _____

1. $\triangle XYZ \cong \triangle RST$
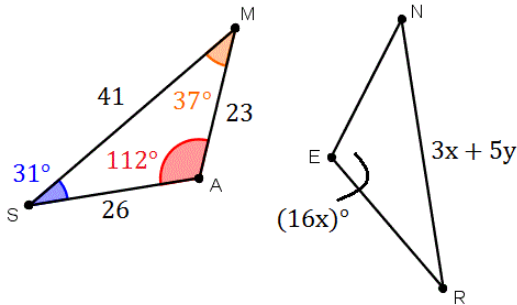   Find the values of a and b.

2. $\triangle MNP \cong \triangle RST$
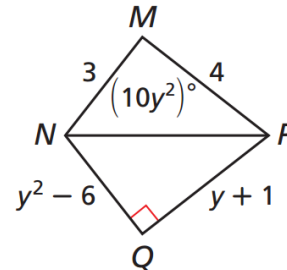   Solve for x and y.

3. $\triangle SAM \cong \triangle REN$
   Solve for x and y.

4. $\triangle MNP \cong \triangle QNP$
   a. Find the value of y *that* makes sense.
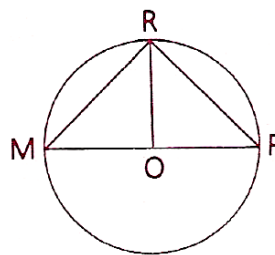   b. Explain how the triangles are congruent.

5. $\triangle STU \cong \triangle XYZ$, $m\angle T = 28°$, $m\angle U = 4x + y$, $m\angle X = 130°$, and $m\angle Y = 8x - 6y$.
   Set up and solve a system of equations to find the values of x and y.

6. Given: $\odot O$
$\overline{RO} \perp \overline{MP}$

   Prove: $\overline{MR} \cong \overline{PR}$
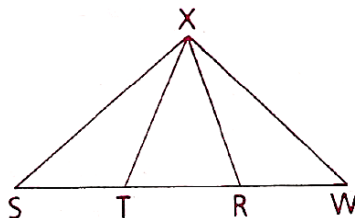

STATEMENTS	ASONS

7. Given: T and R trisect $\overline{SW}$
$\overline{XS} \cong \overline{XW}$
$\angle S \cong \angle W$

   Prove: $\overline{XT} \cong \overline{XR}$
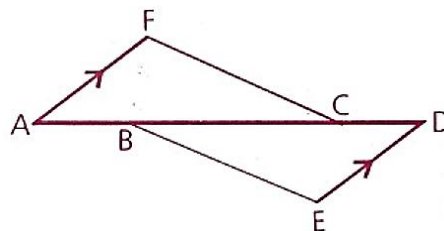

STATEMENTS	REASONS

Chapter 5: Triangles & Congruence

8. Given: $\angle B \cong \angle Y$

              C is the midpoint of $\overline{AZ}$

    Prove: $\overline{AB} \cong \overline{ZY}$
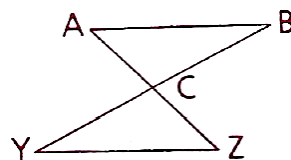
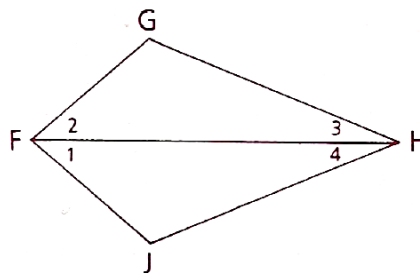| STATEMENTS	REASONS

9. Given: $\overline{FA} \cong \overline{DE}$

              $\overline{AB} \cong \overline{CD}$

              $\overline{FA} \parallel \overline{DE}$

    Prove: $\angle F \cong \angle E$
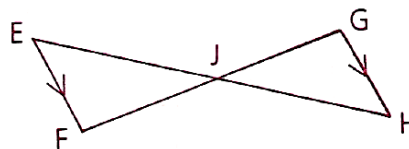

STATEMENTS	REASONS

Chapter 5: Triangles & Congruence

10. Given: $\overleftrightarrow{FH}$ bisects $\angle GFJ$ <u>and</u> $\angle GHJ$

    Prove: $\overline{FG} \cong \overline{FJ}$

STATEMENTS	REASONS

11. Given: J is the midpoint of $\overline{FG}$

    $\overline{EF} \parallel \overline{GH}$

    Prove: $\overline{EJ} \cong \overline{HJ}$

STATEMENTS	REASONS

Chapter 5: Triangles & Congruence