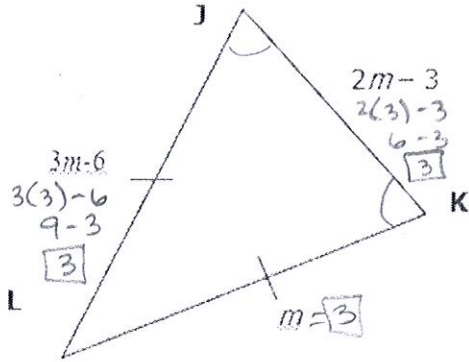


1. Find the value of the variable, answer the questions & then classify the triangle.



Given: $\overline{JL} \cong \overline{KL}$

$$\begin{aligned} 3m-6 &= m \\ -3m &\quad -3m \\ \hline -6 &= -2m \\ \frac{-6}{-2} &= \frac{-2m}{-2} \\ \boxed{3} &= m \end{aligned}$$

$m = \underline{3}$

Can you find the longest side? Can you find the smallest angle? Explain!

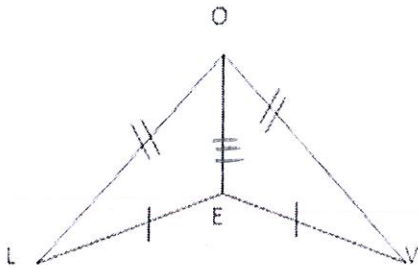
All 3 sides are 3 units long. All sides and all angles are congruent.

Classify by Angle: Acute / Right / Obtuse
(circle one)

Classify by Side: Equilateral / Isosceles / Scalene
(circle one)

2. For each pair of triangles tell the following:

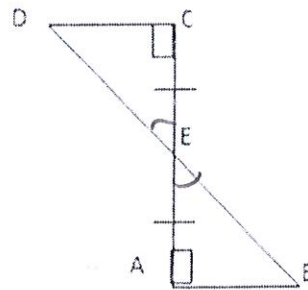
- Are they congruent? If they are congruent then
- Write the triangle congruency statement
- Give the postulate that makes them congruent



a. yes

b. $\triangle LOE \cong \triangle VOE$

c. SSS

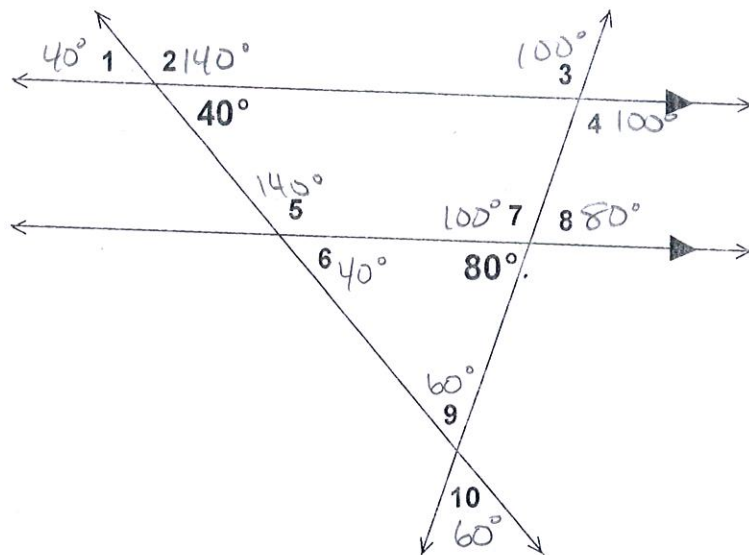


a. yes

b. $\triangle DCE \cong \triangle BAE$

c. ASA

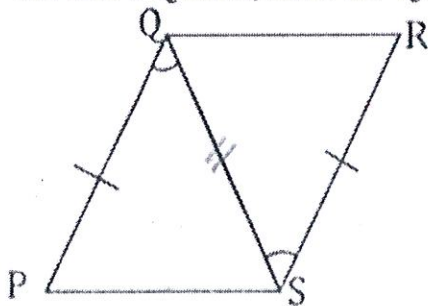
3. Use the diagram below to find each angle measure.



1. <u>40°</u>	2. <u>140°</u>
3. <u>100°</u>	4. <u>100°</u>
5. <u>140°</u>	6. <u>40°</u>
7. <u>100°</u>	8. <u>80°</u>
9. <u>60°</u>	10. <u>60°</u>

4. Write a **2-column** proof with the following information.

Given: $\overline{PQ} \cong \overline{RS}$, and $\angle PQS \cong \angle RSQ$

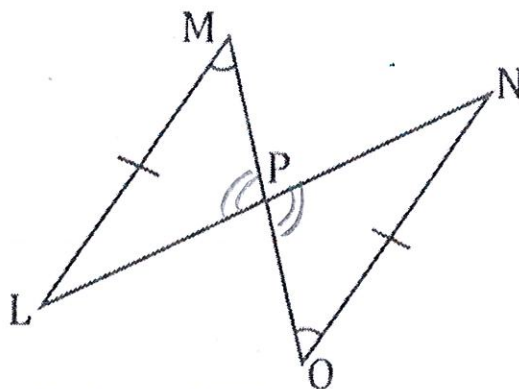


Prove: $\triangle PQS \cong \triangle RSQ$

Statements	Reasons
$\overline{PQ} \cong \overline{RS}$	Given
$\angle PQS \cong \angle RSQ$	Given
$\overline{QS} \cong \overline{QS}$	Reflexive Prop.
$\triangle PQS \cong \triangle RSQ$	SAS

5. Write a **2-column** proof with the following information.

Given: $\overline{LM} \cong \overline{NO}$, and $\angle M \cong \angle O$

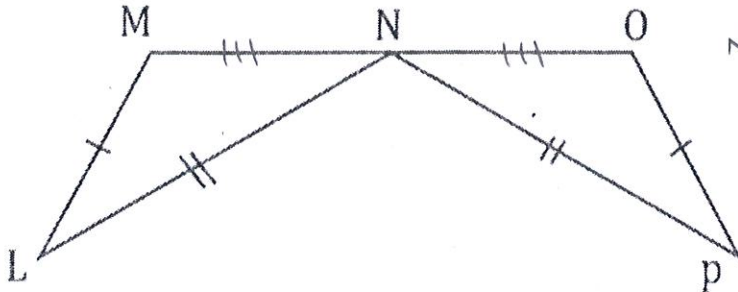


Prove: $\triangle MPL \cong \triangle NPO$

Statements	Reasons
$\overline{LM} \cong \overline{NO}$	Given
$\angle M \cong \angle O$	Given
$\angle MPL \cong \angle OPN$	Vertical angles
$\triangle MPL \cong \triangle NPO$	AAS

6. Write a proof with the following information ☺

Given: N is the midpoint of \overline{MO} , $\overline{LM} \cong \overline{OP}$, and $\overline{LN} \cong \overline{PN}$



Prove: $\triangle LMN \cong \triangle PON$

Statements	Reasons
N is the midpoint of \overline{MO}	Given
$\overline{LM} \cong \overline{OP}$	Given
$\overline{LN} \cong \overline{PN}$	Given
$\overline{MN} \cong \overline{NO}$	Definition of midpoint
$\triangle LMN \cong \triangle PON$	SSS

7. What best describes the triangle below?



- A. scalene and right
- B. isosceles and right
- C. isosceles and acute
- D. scalene and acute
- E. equilateral and right

8. List the five theorems we can use to prove triangles congruent. (theorems...sss, etc.)

SSS, SAS, ASA, AAS, HL

9. List the two ways we CANNOT use to prove triangles are congruent.

AA, SSA

REMEMBER...this is NOT your only study guide! Please study your quiz, notes, and homework!