Name_______________________________________ Date __________________________ Per_______

Geometry - Chapter 4 Review (Part 2)

Match the following statements with the name of the definition, postulate, or theorem.

1) _______ An equilateral triangle is equiangular, and conversely, an equiangular triangle is equilateral.

2) _______ If two angles and the included side in one triangle are congruent to two angles and the included side in another triangle, then the two triangles are congruent.

3) _______ The measure of an exterior angle of a triangle is equal to the sum of the measures of the remote interior angles.

4) _______ If a triangle has two congruent angles, then it is an isosceles triangle.

5) _______ The two angles in a triangle that are not adjacent to the indicated exterior angle.

6) _______ In an isosceles triangle, the bisector of the vertex angle is also the altitude and median to the base.

7) _______ The sum of the measures of the angles in a triangle are 180 degrees.

8) _______ If a triangle is isosceles, then its base angles are congruent.

9) _______ If two angles of one triangle are equal in measure to two angles of another triangle, then the third angle in each triangle is equal in measure to the third angle in the other triangle.

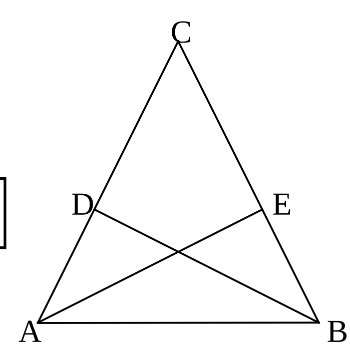
10)_______ If two angles and a non-included side in one triangle are congruent to two corresponding angles and a non-included side in another triangle, then the triangles are congruent.

A) Triangle Sum Theorem
B) Third Angle Theorem
C) Angle-Angle-Side (AAS or SAA) Congruence Postulate
D) Triangle Exterior Angle Theorem
E) Base Angles Theorem
F) Remote Interior Angles
G) Converse of the Base Angles Theorem
H) Equilateral Triangle Theorem
I) Angle-Side-Angle (ASA) Congruence Postulate
J) Vertex Angle Bisector Theorem

11) Use the information to complete the following flow chart proof.

1. ________________
2. ________________
3. ________________
4. ________________
5. ________________
6. ________________

7. ___________ ≅ ___________
8.____________________



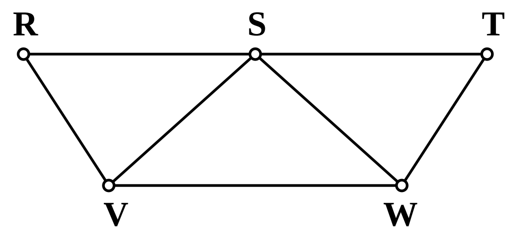
Given: $\overline{AC} \cong \overline{BC}$, $\angle CAE \cong \angle CBD$
Prove: $\triangle CAE \cong \triangle CBD$

12) Given: $\angle R \cong \angle T$

$\overline{RV} \cong \overline{TW}$

S is the midpoint of $\overline{RT}$

Prove: ΔSVW is isosceles

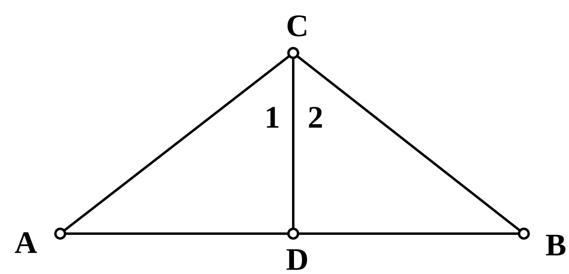


Statement	Reasons
S is the midpoint of $\overline{RT}$	
$\overline{RS} \cong \overline{TS}$	
$\angle R \cong \angle T$	
$\overline{RV} \cong \overline{TW}$	
$\Delta VRS \cong \Delta WTS$	
$\overline{VS} \cong \overline{WS}$	
ΔSVW is an isosceles Δ	

13) Given: Isosceles ΔABC with $\overline{AC} \cong \overline{BC}$

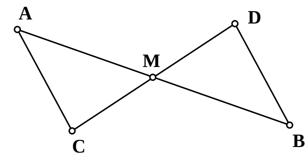
$\overline{CD}$ a median to the base

Prove: $\overline{CD}$ is the angle bis. of $\angle ACB$



Statement	Reasons
$\overline{AC} \cong \overline{BC}$	
$\overline{CD}$ a median to the base	
D is the midpoint of $\overline{AB}$	
$\overline{AD} \cong \overline{BD}$	
$\overline{CD} \cong \overline{CD}$	
$\Delta ADC \cong \Delta BDC$	
$\angle 1 \cong \angle 2$	
$\overline{CD}$ is the angle bisector of $\angle ACB$	

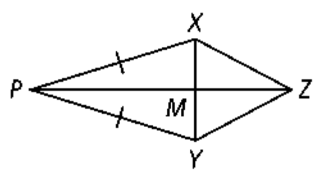
14) Given: M is the midpoint of both $\overline{AB}$ and $\overline{CD}$



Prove: $\overline{AC} \cong \overline{BD}$

Statement	Reasons

15) Given: $\overline{PX} \cong \overline{PY}$, $\overline{ZP}$ bisects $\overline{XY}$

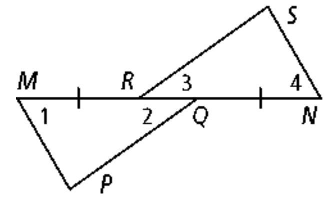


Prove: $\Delta PXZ \cong \Delta PYZ$

Statement	Reasons

16) Given: $\overline{MP} \parallel \overline{NS}$, $\overline{RS} \parallel \overline{PQ}$, $\overline{MR} \cong \overline{NQ}$

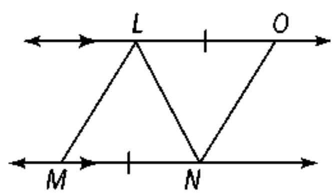
Prove: $\triangle MQP \cong \triangle NRS$



Statement	Reasons

17) Given: $\overline{LO} \cong \overline{MN}$, $\overleftrightarrow{LO} \parallel \overleftrightarrow{MN}$

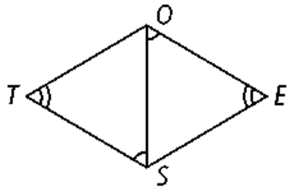
Prove: $\angle MLN \cong \angle ONL$



Statement	Reasons

18) Given: $\angle OTS \cong \angle OES$, $\angle EOS \cong \angle OST$

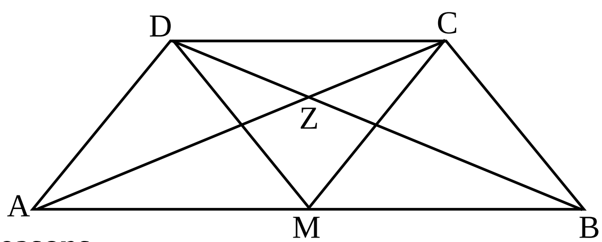
Prove: $\overline{TO} \cong \overline{ES}$



Statement	Reasons

19) Given: $\overline{AM} \cong \overline{MB}$, $\overline{AD} \cong \overline{BC}$
$\angle$MDC $\cong$ $\angle$MCD

Prove: $\overline{AC} \cong \overline{BD}$



Statement	Reasons