Congruent Triangles

Three methods of proving triangles congruent:
   Side–Side–Side (SSS)
         3 sides of one triangle are congruent to 3 sides of another triangle.
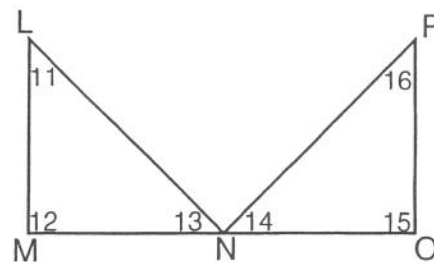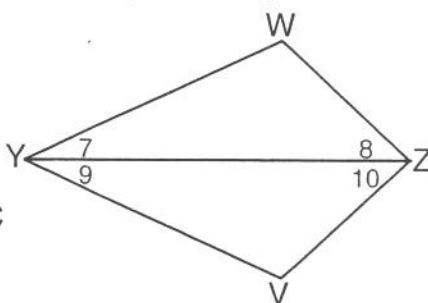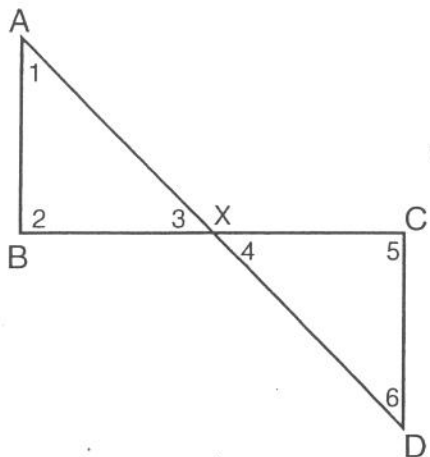   Side–Angle–Side (SAS)
         2 sides and the included angle of one triangle are congruent to 2 sides and the included angle of another triangle.
   Angle–Side–Angle (ASA)
         2 angles and the included side of one triangle are congruent to 2 angles and the included side of another triangle.

Use the diagrams and the information given to determine which of the above methods will prove the triangles congruent. Circle the letters beneath the correct method in the chart to reveal the mathematician who developed the symbol for congruence ($\cong$).

1. X is the midpoint of $\overline{AD}$ and $\overline{BC}$
2. $\overline{AB} \perp \overline{BC}$; $\overline{DC} \perp \overline{BC}$; $BX = XC$
3. $\overline{AB} \parallel \overline{CD}$; $AB = CD$
4. $YW = YV$; $WZ = VZ$
5. $\angle 7 = \angle 9$; $\angle 8 = \angle 10$
6. $WZ = VZ$; $\overline{YZ}$ bisects $\angle WZV$
7. $\overline{AD}$ and $\overline{BC}$ bisect each other
8. N is the midpoint of $\overline{MO}$; $LM = PO$; $LN = PN$
9. $\overline{LM}$ and $\overline{PO}$ are $\perp$ to $\overline{MO}$; $\angle 11 = \angle 16$; $LM = PO$
10. N is the midpoint of $\overline{MO}$; $\angle 12 = \angle 15$; $\angle 13 = \angle 14$
11. $LM = PO$; $MN = NO$; $LN = PN$
12. $\overline{ZY}$ bisects $\angle WYV$; $WY = YV$
13. $\angle 1 = \angle 6$; X is the midpoint of $\overline{AD}$
14. N is the midpoint of $\overline{MO}$; $LN = PN$; $\angle 13 = \angle 14$
15. $\overline{YZ}$ bisects $\angle WYV$ and $\angle WZV$
16. $\triangle WYZ$ and $\triangle VYZ$ are equilateral

	SSS	SAS	ASA
1.	A	G	R
2.	C	H	O
3.	I	M	T
4.	T	E	D
5.	E	S	F
6.	T	R	H
7.	A	I	L
8.	E	Z	P
9.	L	M	D
10.	B	P	L
11.	E	A	S
12.	C	I	A
13.	L	O	B
14.	Q	N	P
15.	R	M	I
16.	Z	O	S

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