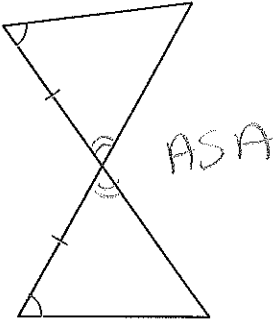


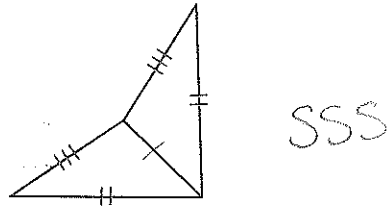
4.3 - 4.5 Classwork

State if the two triangles are congruent. If they are, state how you know SSS, SAS, ASA, AAS, or none.

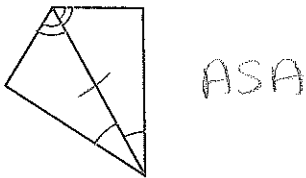
1)



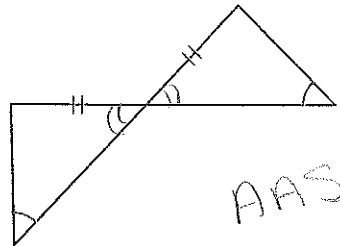
2)



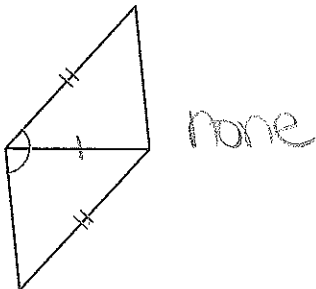
3)



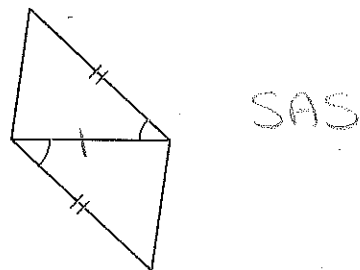
4)

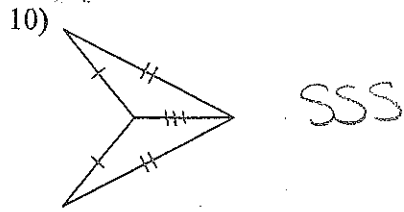
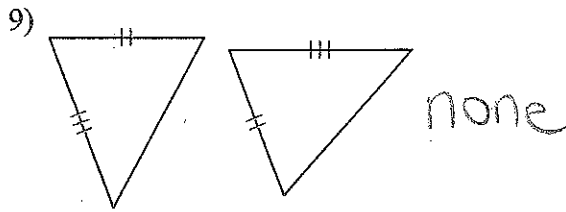
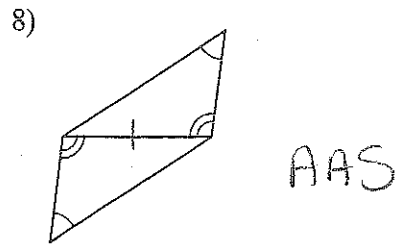


5)



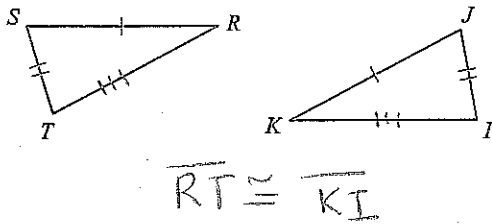
6)



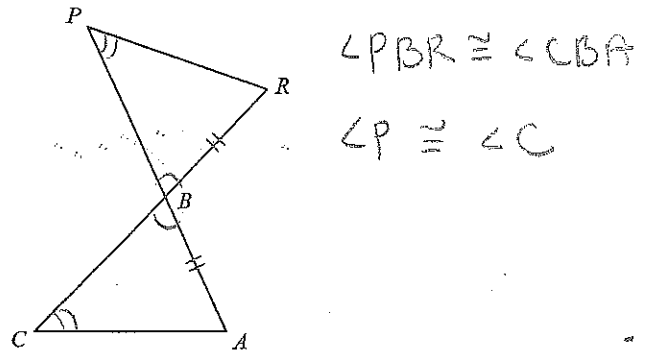


State what additional information is required in order to know that the triangles are congruent for the reason given.

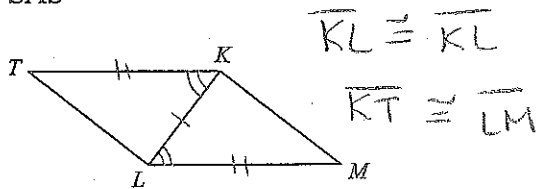
11) SSS



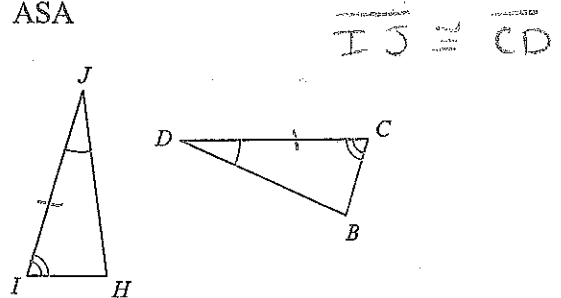
12) AAS



13) SAS



14) ASA



15.

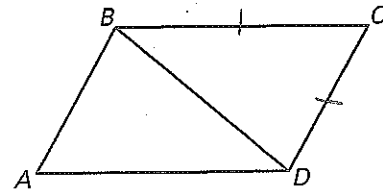
Use the diagram to name the included angle between the given pair of sides.

(a) \overline{AB} and \overline{BC}

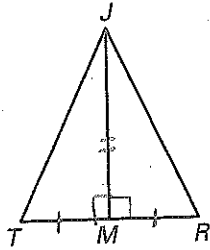
$\angle ABC$

(b) \overline{BC} and \overline{CD}

$\angle BCD$



16. (a) Mark the diagram with the information you can conclude.



$$\overline{TM} \cong \overline{RM}$$

(b) List the triangle congruencies.

1. $\overline{TM} \cong \overline{RM}$

2. $\angle TMJ \cong \angle RMJ$

3. $\overline{MJ} \cong \overline{MJ}$

(c) Give a congruence statement (ex: $\triangle WBF \cong \triangle RIT$)

$$\triangle TMJ \cong \triangle RMJ$$

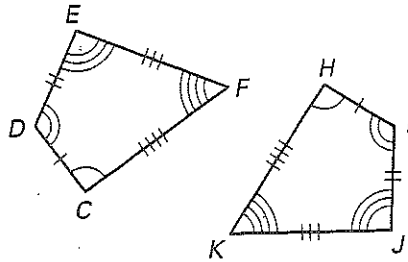
(d) State the theorem or postulate used to prove the triangles are congruent.

SAS

17. (a) Identify all congruent corresponding sides and angles of the following figure.

Congruent Sides

1. $\overline{CD} \cong \overline{HI}$
2. $\overline{DE} \cong \overline{IJ}$
3. $\overline{EF} \cong \overline{JK}$
4. $\overline{FC} \cong \overline{KH}$



Congruent Angles

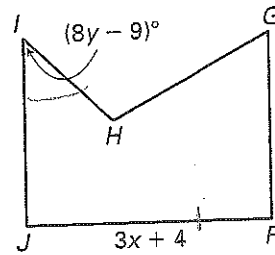
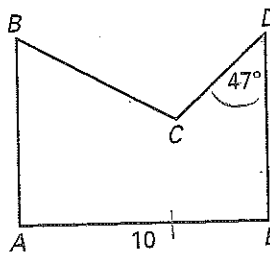
1. $\angle C \cong \angle H$
2. $\angle D \cong \angle I$
3. $\angle E \cong \angle J$
4. $\angle F \cong \angle K$

(b) Write a congruence statement (ex: $\triangle WBF \cong \triangle RIT$)

$CDEF \cong HIJK$

18. In the diagram, $ABCDE \cong FGHIJ$.

- a. Find the value of x .
- b. Find the value of y .

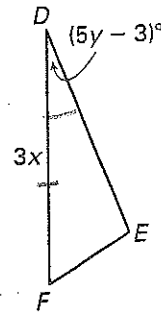
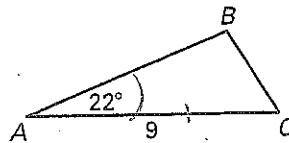


$3x + 4 = 10$
 $3x = 6$
 $x = 2$

$8y - 9 = 47$
 $8y = 56$
 $y = 7$

19. In the diagram, $\triangle ABC \cong \triangle DEF$.

1. Find the value of x .
2. Find the value of y .

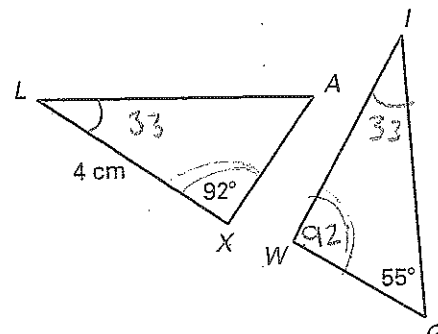


$3x = 9$
 $x = 3$

$5y - 3 = 22$
 $5y = 25$
 $y = 5$

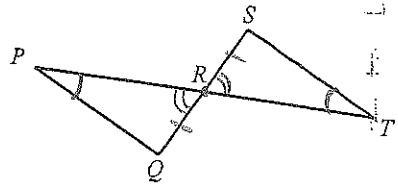
20. In the diagram, $\triangle ALX \cong \triangle GIW$. Complete the statement.

- $\overline{LX} \cong \underline{?} \overline{IW}$
 $\angle I \cong \underline{?} \angle L$
 $\angle A \cong \underline{?} \angle G$
 $m\angle I = \underline{?} 33^\circ$
 $IW = \underline{?} 4\text{cm}$
 $\triangle ALX \cong \underline{?} \triangle GIW$



21.

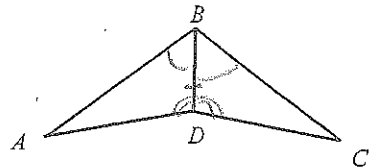
Given: $\angle RPQ \cong \angle RTS$, R is the midpoint of \overline{QS}
 Prove: $\triangle PQR \cong \triangle TSR$



Statements	Reasons
1. $\angle RPQ \cong \angle RTS$	1. Given
2. R is the midpoint of \overline{QS}	2. Given
3. $\overline{QR} \cong \overline{SR}$	3. definition of midpoint
4. $\angle PRQ \cong \angle TRS$	4. vertical angles
5. $\triangle PQR \cong \triangle TSR$	5. AAS

22.

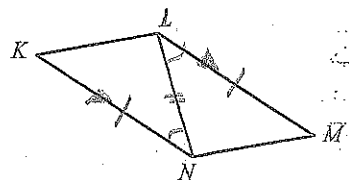
Given: \overline{BD} bisects $\angle ABC$, $\angle BDA \cong \angle BDC$
 Prove: $\triangle ABD \cong \triangle CBD$



Statements	Reasons
1. \overline{BD} bisects $\angle ABC$	1. Given
2. $\angle ABD \cong \angle CBD$	2. definition of \angle bisector
3. $\angle BDA \cong \angle BDC$	3. Given
4. $\overline{BD} \cong \overline{BD}$	4. reflexive property
5. $\triangle ABD \cong \triangle CBD$	5. ASA

23

Given: $\overline{KN} \cong \overline{LM}$, $\overline{KN} \parallel \overline{LM}$
 Prove: $\triangle KLN \cong \triangle MNL$



Statements	Reasons
1. $\overline{KN} \cong \overline{LM}$	1. Given
2. $\overline{KN} \parallel \overline{LM}$	2. Given
3. $\angle KNL \cong \angle MLN$	3. Alt. int \angle
4. $\overline{LN} \cong \overline{LN}$	4. reflexive property
5. $\triangle KLN \cong \triangle MNL$	5. SAS