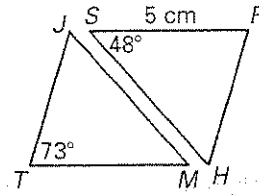


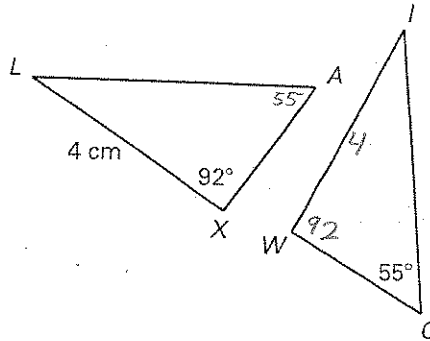
In the diagram, $\triangle TJM \cong \triangle PHS$. Complete the statement.

2. $\angle P \cong \angle T$
3. $\overline{JM} \cong \overline{HS}$
4. $m\angle M = m\angle S$
5. $m\angle P = m\angle T$
6. $MT = SP$
7. $\triangle HPS \cong \triangle JTM$



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

1. $\overline{LX} \cong \overline{IW}$
2. $\angle I \cong \angle L$
3. $\angle A \cong \angle G$
4. $m\angle I = m\angle L = 33^\circ$
5. $IW = LX = 4$
6. $\triangle LAX \cong \triangle IGW$



Write a congruence statement for any figures that can be proved congruent. Explain your reasoning.

7. $\triangle VWY \cong \triangle TXZ$
 $\angle W \cong \angle Z ; \angle V \cong \angle T$
 $\overline{XU} \cong \overline{YU} \cong \overline{TU} \cong \overline{VU}$
 $\overline{VY} \cong \overline{TX} ; \overline{ZY} \cong \overline{VX}$
 $\overline{WY} \cong \overline{ZX} ; \overline{TZ} \cong \overline{VW}$

8. $CDEF \cong KHIJ$

$\angle DC \cong \angle IH ; \angle DE \cong \angle IJ$
 $\overline{EF} \cong \overline{JK} ; \overline{FC} \cong \overline{KH}$
 $\angle C \cong \angle H ; \angle D \cong \angle I ; \angle E \cong \angle J$
 $\angle F \cong \angle K$
 $CDEF \cong KHIJ$

Find the value of x and y.

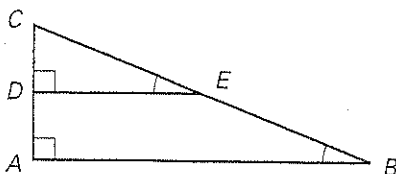
9. $\triangle ABC \cong \triangle FED$
 $\frac{1}{2}x + 1 = 31$
 $\frac{1}{2}x = 30$
 $x = 60$
 $129 = 2x + 3$
 $132 = 2y$
 $66 = y$

10. $\triangle WQP \cong \triangle WYQ \cong \triangle YQP$
 34
 56°
 $(5x + y)^\circ$
 $(4x + 2y)^\circ$

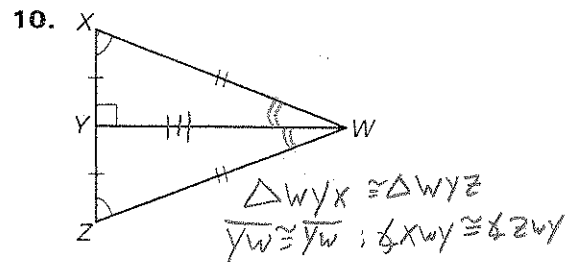
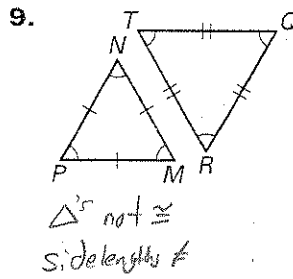
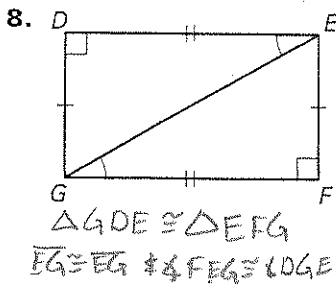
$4x + 2y = 56$
 $(5x + y = 34) \cdot 2$
 $4x + 2y = 56$
 $10x - 2y = 68$
 $-6x = -12$
 $x = 2$
 $10 + y = 34$
 $y = 24$

11. Error Analysis A fellow student says that $\triangle ABC \cong \triangle DEC$ because the corresponding angles of the triangles are congruent. Describe the error in this statement.

Side lengths are not \cong .



Write a congruence statement for any figures that can be proved congruent. Explain your reasoning.

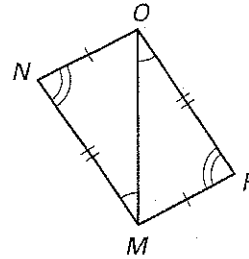


12. Suppose $\triangle RST \cong \triangle UVW \cong \triangle XYZ$, $m\angle R = 55^\circ$, and $m\angle V = 45^\circ$. What is $m\angle Z$?
 $m\angle X = 55^\circ$ $m\angle Y = 45^\circ$ $m\angle Z = 80^\circ$

13. Proof Complete the proof.

GIVEN: $\angle MNO \cong \angle OPM$, $\angle NMO \cong \angle POM$,
 $\overline{NO} \cong \overline{MP}$, $\overline{NM} \cong \overline{OP}$

PROVE: $\triangle NMO \cong \triangle POM$

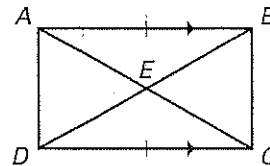


Statements	Reasons
1. $\angle MNO \cong \angle OPM$, $\angle NMO \cong \angle POM$, $\overline{NO} \cong \overline{MP}$, $\overline{NM} \cong \overline{OP}$	1. Given
2. $\overline{MO} \cong \overline{MO}$	2. ? Reflexive
3. $\angle NOM \cong \angle PMO$	3. ? Third angles Theorem
4. $\triangle NMO \cong \triangle POM$	4. ? Def. of $\cong \triangle$'s

14. Proof Complete the proof.

GIVEN: $\overline{AB} \parallel \overline{DC}$, $\overline{AB} \cong \overline{DC}$,
 E is the midpoint of \overline{AD} and \overline{BC} .

PROVE: $\triangle AEB \cong \triangle CED$



Statements	Reasons
1. $\overline{AB} \parallel \overline{DC}$, $\overline{AB} \cong \overline{DC}$, E is the midpoint of \overline{AD} and \overline{BC} .	1. Given
2. $\overline{AE} \cong \overline{CE}$ $\overline{BE} \cong \overline{DE}$	2. ? Def. of Midpoint
3. $\angle EAB \cong \angle ECD$ $\angle ABD \cong \angle BDC$	3. ? Alternate Interior Angles Theorem
4. $\angle AEB \cong \angle CED$	4. ? Vertical Angles Theorem
5. $\triangle AEB \cong \triangle CED$	5. ? Def. of $\cong \triangle$'s