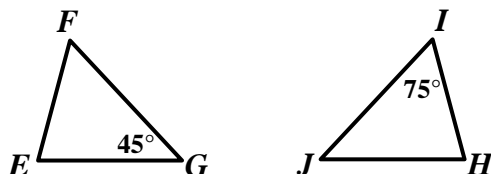
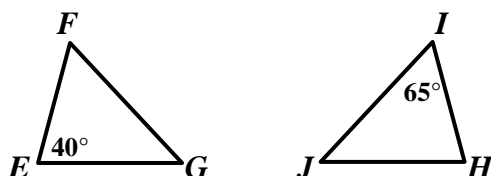


Unit 3 "Ticket To Retake"

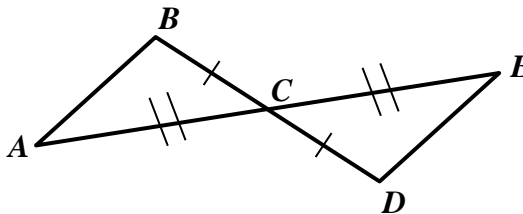
1. In the diagram  $\triangle EFG \cong \triangle HIJ$ . What is the measure of  $\angle H$ ? 1. \_\_\_\_\_



2. In the diagram  $\triangle EFG \cong \triangle HIJ$ . What is the measure of  $\angle J$ ? 2. \_\_\_\_\_



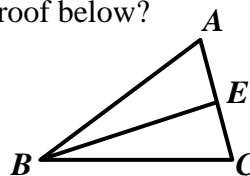
3. Name ALL possible corresponding congruence statements given  $\triangle ABC \cong \triangle EDC$  3. \_\_\_\_\_



4. What reason can be used to justify each statement in the proof below?

Given:  $\overline{AB} \cong \overline{CB}$ , E is the midpoint of  $\overline{AC}$

Prove:  $\triangle ABD \cong \triangle CBD$

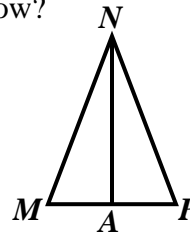


<u>Statement</u>	<u>Reason</u>
1. $\overline{AB} \cong \overline{CB}$ , E is the midpoint of $\overline{AC}$	1. _____
2. $\overline{AE} \cong \overline{CE}$	2. _____
3. $\overline{BE} \cong \overline{BE}$	3. _____
4. $\triangle ABE \cong \triangle CBE$	4. _____

5. What reason can be used to justify the statements in the proof below?

Given:  $\overline{MA} \cong \overline{PA}$ ,  $\angle MAN \cong \angle PAN$

Prove:  $\angle M \cong \angle P$

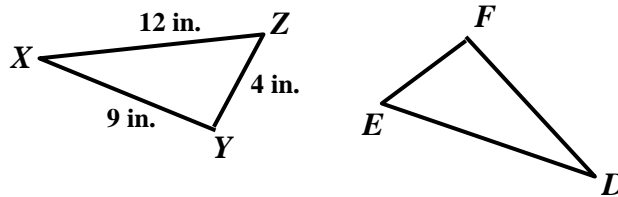


Statements

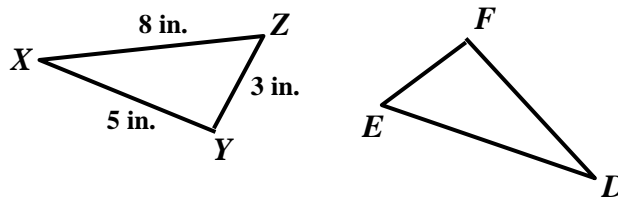
Reasons

1.	$\overline{MA} \cong \overline{PA}$ , $\angle MAN \cong \angle PAN$	1.	_____
2.	$\overline{NA} \cong \overline{NA}$	2.	_____
3.	$\triangle MAN \cong \triangle PAN$	3.	_____
4.	$\angle M \cong \angle P$	4.	_____

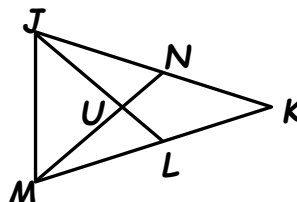
6. The measures of  $\angle X$  and  $\angle D$  are both  $17^\circ$ . The measures of  $\angle Y$  and  $\angle F$  are both  $85^\circ$ .  $\overline{FE} \cong \overline{YZ}$ . Based on this information, what is the length of side  $\overline{FD}$  ? 6. \_\_\_\_\_



7. The measures of  $\angle X$  and  $\angle D$  are both  $37^\circ$ . The measures of  $\angle Y$  and  $\angle F$  are both  $70^\circ$ .  $\overline{FE} \cong \overline{YZ}$ . Based on this information, what is the length of side  $\overline{FD}$  ? 7. \_\_\_\_\_

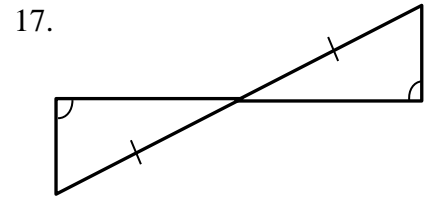
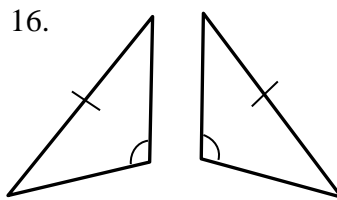
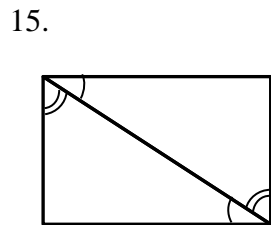
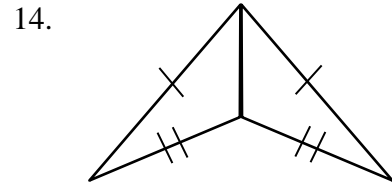
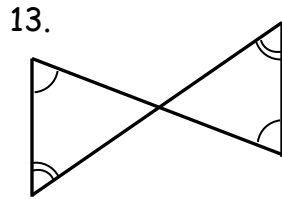
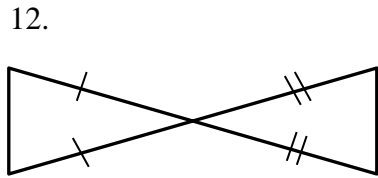
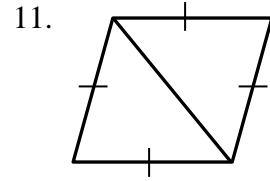
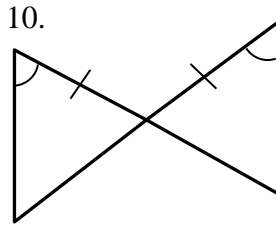
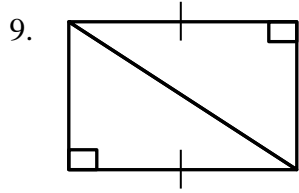


8. What is the common angle of  $\triangle JKL$  and  $\triangle MNK$ ? 8. \_\_\_\_\_



9 – 17 In the below diagrams, choose the letter that identifies the postulate or theorem you would use to prove each pair of triangles congruent.

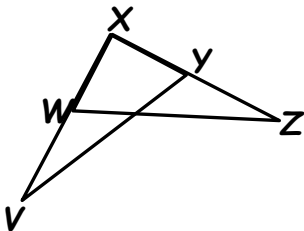
- A. SAS                      B. ASA                      C. AAS  
 D. SSS                      E. HL                      F. None, not enough information



18. Name a pair of overlapping congruent triangles in the diagram. State whether the triangles are congruent by SSS, SAS, ASA, AAS or HL.

Given:  $\overline{XY} \cong \overline{WX}$  ;  $\overline{XZ} \cong \overline{XV}$

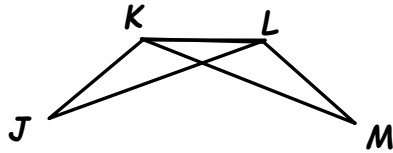
18.  $\triangle$  \_\_\_\_\_  $\cong$   $\triangle$  \_\_\_\_\_  
 \_\_\_\_\_



19. Name a pair of overlapping congruent triangles in the diagram. State whether the triangles are congruent by SSS, SAS, ASA, AAS or HL.

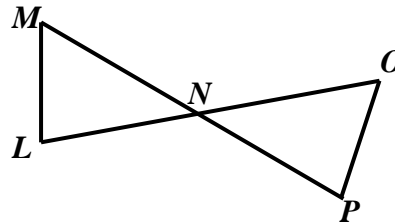
Given:  $\angle JKL \cong \angle MLK$ ;  $\angle MKL \cong \angle JLK$

19.  $\Delta$  \_\_\_\_\_  $\cong \Delta$  \_\_\_\_\_



20. Given:  $\overline{LM} \cong \overline{OP}$ ,  $\angle L \cong \angle P$

Prove:  $\overline{LN} \cong \overline{PN}$



**Statements**

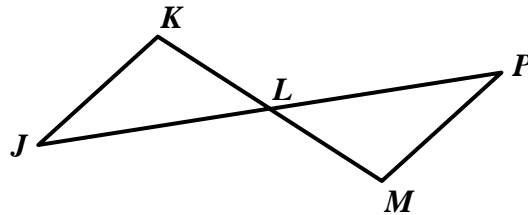
**Reasons**

1. \_\_\_\_\_
2.  $\angle MNL \cong \angle ONP$
3.  $\triangle MNL \cong \triangle ONP$
4. \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

21. Given:  $\angle K \cong \angle M$  and  $\overline{KL} \cong \overline{ML}$

Prove:  $\triangle JKL \cong \triangle PML$



**Statements**

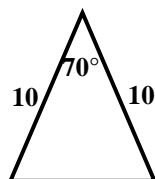
**Reasons**

1. \_\_\_\_\_
2.  $\angle JLK \cong \angle PLM$
3. \_\_\_\_\_

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

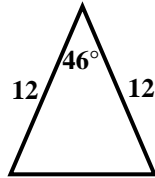
22. What is the measure of each base angle of an isosceles triangle if its vertex angle measures  $70^\circ$  and its two congruent sides measure 10 units?

22. \_\_\_\_\_



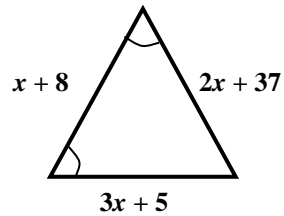
23. What is the measure of each base angle of an isosceles triangle if its vertex angle measures  $46^\circ$  and its two congruent sides measure 12 units?

23. \_\_\_\_\_



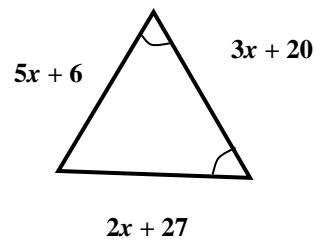
24. What is the value of  $x$ ?

24. \_\_\_\_\_



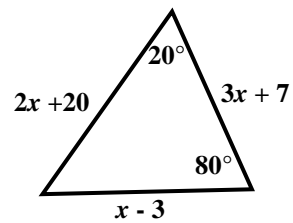
25. What is the value of  $x$ ?

25. \_\_\_\_\_



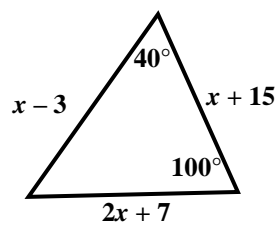
26. Solve for  $x$ .

26. \_\_\_\_\_

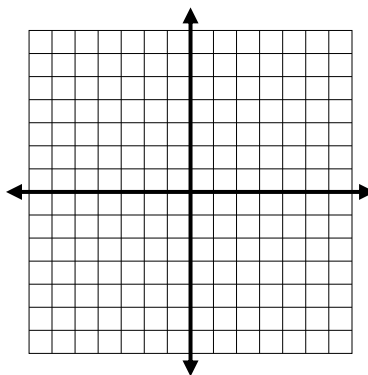


27. Solve for  $x$ .

27. \_\_\_\_\_



28. Graph the triangle whose vertices have the coordinates  $M (-2, -3)$ ,  $N (-6, -3)$ , and  $P (-4, -7)$ . Then draw its reflection over the x-axis. Label the original triangle  $MNP$  and label the reflected triangle  $M'N'P'$



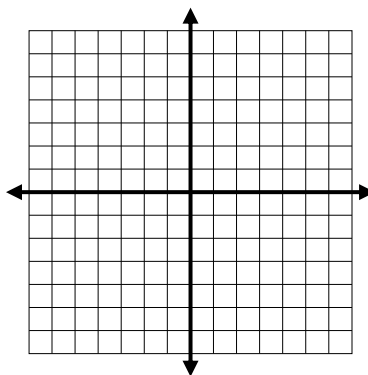
Is  $\triangle MNP \cong \triangle M'N'P'$ ? Explain your reasoning. \_\_\_\_\_

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29. Graph the triangle whose vertices have the coordinates  $M (3, -1)$ ,  $N (7, -1)$ , and  $P (5, -5)$ . Then draw its reflection over the y-axis. Label the original triangle  $MNP$  and label the reflected triangle  $M'N'P'$



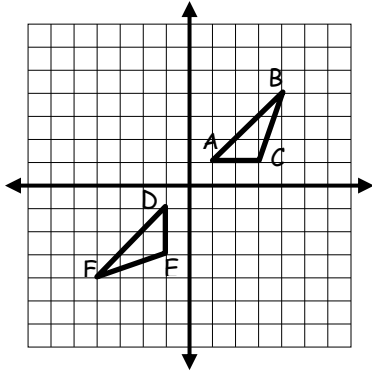
Is  $\triangle MNP \cong \triangle M'N'P'$ ? Explain your reasoning. \_\_\_\_\_

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30.



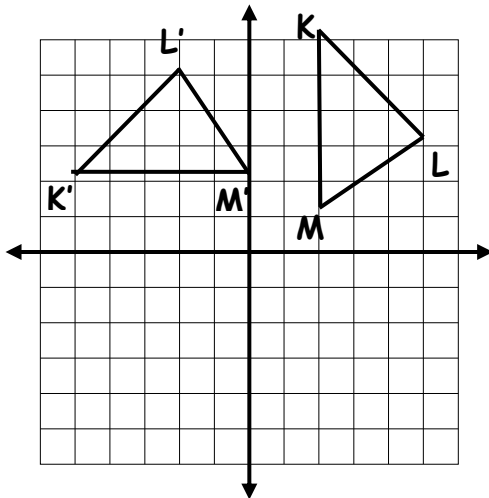
Describe the transformation of mapping  $\Delta ABC$  to  $\Delta DFE$ .

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31.



Describe the transformation of mapping  $\Delta KLM$  to  $\Delta K'L'M'$ .

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