

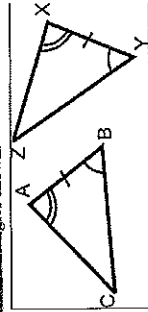
Unit 2 - REVIEW

1. If a triangle is translated left 2, down 5, then rotated 90° about the origin, is the image similar to the pre-image?

yes! Isometric, so same shape...
 Congruent?
 yes, isometric...

SU BOTH!

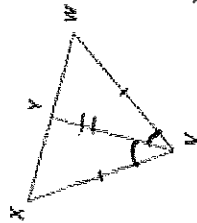
2. Consider the triangles shown:



Which triangle congruence theorem can be used to prove the triangles are congruent?

ASA

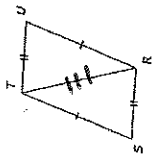
3. What else is needed to prove $\triangle XYV \cong \triangle WYV$?



Know $\triangle XVW$ is isosceles,
 Thus, \overline{VY} is altitude,
 bisects $\angle XVW$.
 $\angle XYV \cong \angle WYV$.
 Also, $\overline{VY} \cong \overline{VY}$.
 Thus, $\triangle XYV \cong \triangle WYV$
 by SAS.

Name: _____

4. Complete the proof that $\triangle RTU \cong \triangle STS$.

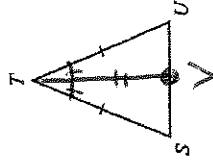


* add in markings

Statement	Reason
1. $\overline{RT} \cong \overline{ST}$	Given
2. $\overline{TU} \cong \overline{TU}$	Given
3. $\angle RTU \cong \angle STS$	Reflexive Property of Congruence
4. $\triangle RTU \cong \triangle STS$	

By SSS

5. In this diagram, STU is an isosceles triangle where \overline{ST} is congruent to \overline{UT} . The paragraph proof shows that $\angle S$ is congruent to $\angle U$.



It is given that \overline{ST} is congruent to \overline{UT} . Draw \overline{TV} such that V is on \overline{SU} and \overline{TV} bisects $\angle T$. By the definition of an angle bisector, $\angle STV$ is congruent to $\angle UTV$. By the Reflexive Property of Congruence, \overline{TV} is congruent to \overline{TV} . Triangle STV is congruent to triangle UTV by $\angle S$ is congruent to $\angle U$ by CPCTC.

Which Step is missing in the proof?

SAS

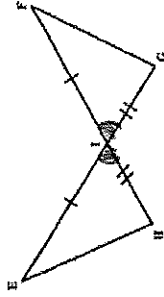
6. Which triangle congruence theorem can be used to prove these triangles are congruent?



SSS

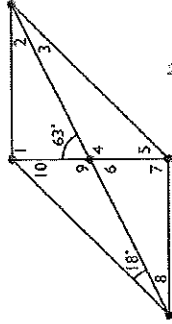
Unit 2 - REVIEW

7. Which triangle congruence theorem can be used to prove these triangles are congruent?



SAS

8. Solve for the missing angles and classify the quadrilateral:

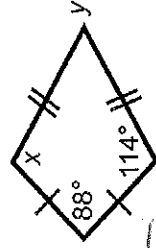


- 1 - 90
- 2 - 270
- 3 - 180
- 4 - 1170
- 5 - 1170
- 6 - 45
- 7 - 900
- 8 - 270
- 9 - 1170
- 10 - 45

9. Solve for the missing variables and classify the quadrilateral:

Kite

$x = 114^\circ$
 $y = 44^\circ$

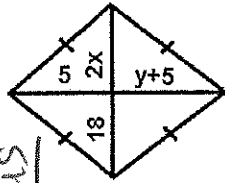


* all add up to 360°

Name: _____

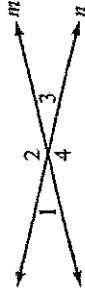
10. Solve for the missing variables and classify the quadrilateral:

Classification: Rhombus



$x = 9$
 $y = 0$

11. In this diagram, line m intersects line n .



Step	Statement	Justification
1	Line m intersects line n .	Given
2	$\angle 1$ & $\angle 2$ form a linear pair	Definition of linear pair
3	$m\angle 1 + m\angle 2 = 180^\circ$ $m\angle 2 + m\angle 3 = 180^\circ$	Angles that form a linear pair have measures that sum to 180°
4	$m\angle 1 + m\angle 2 = m\angle 2 + m\angle 3$	Substitution
5	$m\angle 1 = m\angle 3$??
6	$\angle 1 \cong \angle 3$	Definition of congruent angles

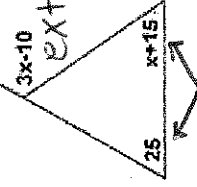
What is the justification/reason for step 5?

Subtraction Prop. of Equ.

12. Solve for x :

$25 + (x + 15) = 3x - 10$

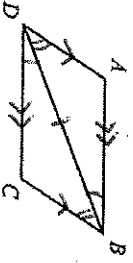
$x = 25$



remote interior \angle 's

Unit 2 - REVIEW

13. In this diagram, ABCD is a parallelogram and \overline{BD} is a diagonal.



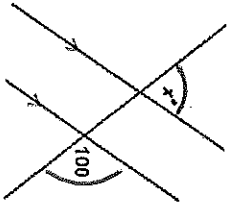
The following is a two column proof showing that $\triangle ABD \cong \triangle CBD$ are congruent.

Step	Statement	Justification
1	ABCD is a parallelogram	Given
2	\overline{BD} is a diagonal	Given
3	\overline{AB} is parallel to \overline{DC}	Definition of parallelogram
4	$\angle ABD \cong \angle CDB$	Alternate interior angles
5	$\overline{BD} \cong \overline{BD}$??
6	$\triangle ABD \cong \triangle CBD$	ASA
7	$\overline{AB} \cong \overline{CD}$	CPCTC

What is the justification to step 5's statement?

Reflexive Prop.

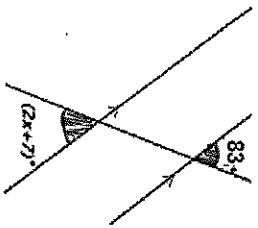
14. Solve for x:



$X = 80^\circ$

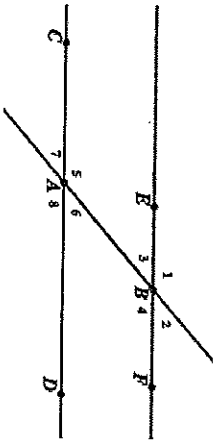
Name: _____

15. Solve for x:



$X = 38$

Use the figure below to answer questions 16 and 17.



16. In relation to each other, $\angle 1$ and $\angle 4$ are considered are:

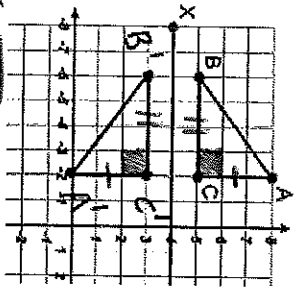
vertical \angle 's

17. In relation to each other, $\angle 5$ and $\angle 6$ are considered are:

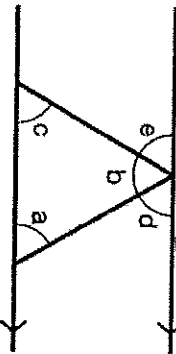
Linear pair
(so supplementary)

Unit 2 - REVIEW

18. Is $\triangle ABC$ congruent to $\triangle A'B'C'$? Explain.



$\overline{BC} \cong \overline{B'C'}$ because both are 4 units long. $\overline{AC} \cong \overline{A'C'}$ because they're 3 units long. $\angle BCA$ and $\angle B'C'A'$ are right \angle 's (formed by vertical lines). Prove by SAS.



Write a justification to prove that the sum of the angles in a triangle is 180° .

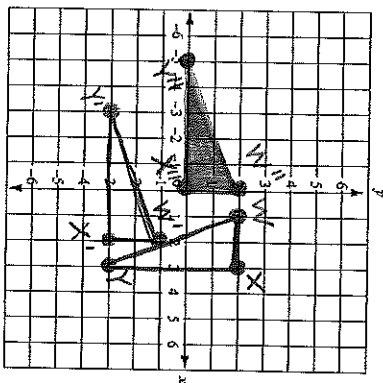
Know top/bottom lines are parallel. Thus, $\angle e \cong \angle c$ and $\angle d \cong \angle a$ by Alt. Interior \angle 's. $\angle b \cong \angle b$ by Reflexive Property.

$\angle c + \angle b + \angle d = 180^\circ$ (straight \angle).
USE substitution, we can say $\angle c + \angle b + \angle a = 180^\circ$.

Name: _____

Key

20. Triangle WXY has coordinates W(1,2), X(3,2), Y(3,-3).



Graph the image of triangle WXY after a rotation of 90 degrees clockwise about the origin. Label the image $W'X'Y'$.
Translate triangle WXY 2 units left and 3 units up and label $W''X''Y''$.
Is triangle WXY congruent to triangle $W'X'Y'$? Explain below!
yes, only did isometric transformations.