Geo – Unit 2 Review Name_____

Date _____ Period _____

1. What are the four types of transformations?

2. What is the definition of a rigid transformation? Which transformation is not a rigid motion?

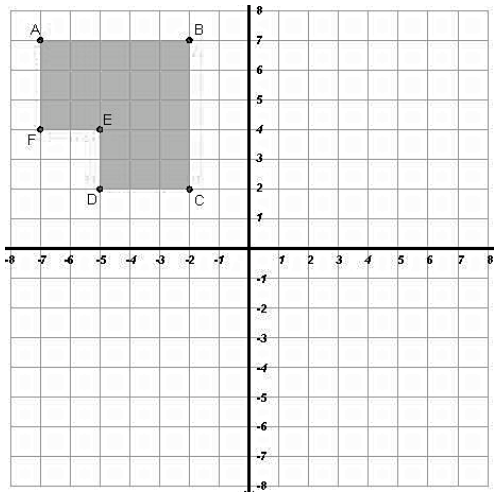
3. Describe the transformation that is described by the notation below:

$$(x, y) \rightarrow (x - 3, y + 4)$$

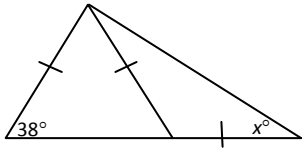
4. What are the following rules:
   a. Rotation 180°
   b. Rotation 90°
   c. Reflection across the *x*-axis:
   d. Reflection across the *y*-axis:
   e. Reflection across the line *y=x*
   f. Translation 4 units to the right and 5 units down.

5. What transformation would move a diamond to the position of another diamond and explain your reasoning.

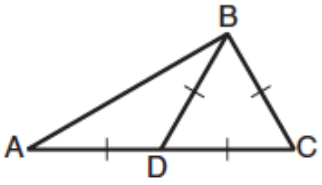
6. In the grid below, reflect the given figure across the x-axis, then show the transformation of
   $(x', y') \rightarrow (x' + 3, y' - 4)$



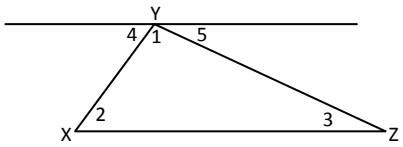
7. Find the value of *x*. What facts or theorems did you need to use?



8. Find the $m\angle DBA$. What theorems or facts did you need to use to find $m\angle DBA$?



9. Given: ΔXYZ
   Prove: $m\angle 1 + m\angle 2 + m\angle 3 = 180°$



Statements	Reasons

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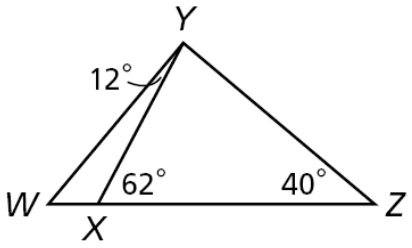
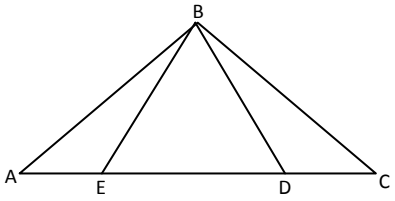
10. Find the $m\angle YWZ$. What theorems or facts did you need to use to find $m\angle YWZ$?

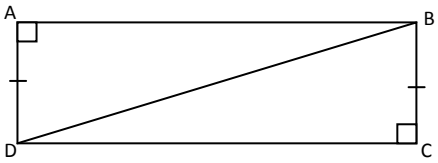


11. What are the 5 Triangle Congruence statements that we learned to prove triangles are congruent? Draw an example of each one.

12. Given: $\overline{EB} \cong \overline{BD}; \overline{AE} \cong \overline{DC}$
Prove: ΔABC is isosceles
Write your proof as a two column proof AND a flow chart proof.



13. Given: Rectangle ABCD
Prove: Two triangles created by diagonal BD are congruent.



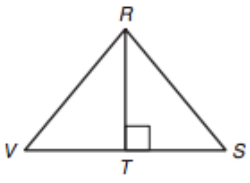
Prove this using two different ways, such as flowchart proof, paragraph proof or two-column proof.

14.

Complete the proof.

Given: T is the midpoint of $\overline{VS}$.
$\overline{RT} \perp \overline{VS}$

Prove: $\triangle RST \cong \triangle RVT$



<u>Please review the following terms form previous sections:</u>

Linear Pair Theorem

Angle Addition Postulate

Isosceles Triangle Theorem

Definition of Linear Pair

Definition of Congruence

Definition of a straight angle