

3.11 Lesson

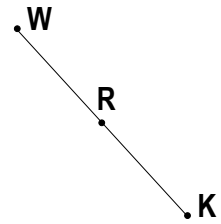
Name (print first and last) _____ Per _____ Date: 10/31 due 11/1

3.11 Rigid Transformations: Congruence

Geometry Regents 2013-2014 Ms. Lomac

SLO: I can explain the relationship between rigid motions and congruence and the role of correspondence.

- (1) Construct the perpendicular bisector of \overline{WK} to verify (check) that R is the midpoint of \overline{WK} . Constructing the perpendicular bisector of \overline{WK} supports the claim that R is the midpoint of \overline{WK} because



- (2) **Correspondence** can be thought of as a “pairing” of points between two shapes. List a few everyday objects that come in pairs. _____

(a) Are pairs of everyday objects always identical/congruent?

(b) Think about a pair of shoes. What part of the right shoe corresponds to the given part of the left shoe?

Left Shoe: Lace Sole Tongue Velcro

Right Shoe: _____

(c) The right lace does/does not have to be exactly the same as the left because _____

- (3) Like the shoes, corresponding parts of figures do not have to be exactly the same – congruent – however, they always will be when a figure undergoes a rigid transformation because _____

- (4) In the figure below, the left figure has been mapped to the one on the right by a rotation of 240° around point P.

Point _____ corresponds to point _____

Point _____ corresponds to point _____

Point _____ corresponds to point _____

Segment _____ corresponds to segment _____

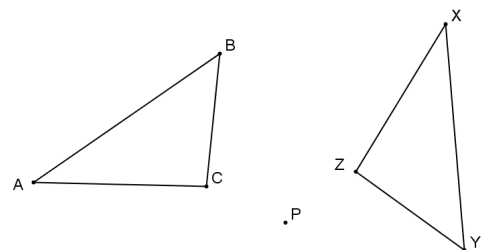
Segment _____ corresponds to segment _____

Segment _____ corresponds to segment _____

Angle _____ corresponds to angle _____

Angle _____ corresponds to angle _____

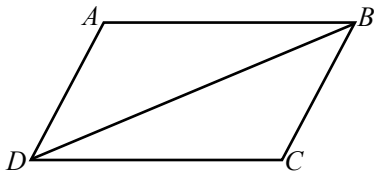
Angle _____ corresponds to angle _____



Write the abbreviation (function notation) for the transformation _____

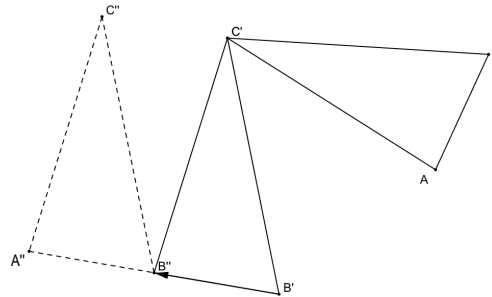
3.11

(5) The triangles in the figure below are congruent by a _____° rotation around the midpoint (not drawn) of \overline{BD} . List the corresponding sides and angles.



Sides: _____ → _____, _____ → _____, _____ → _____
 Angles: _____ → _____, _____ → _____, _____ → _____
 Are the corresponding parts congruent? _____ because _____

(6) Below is a composition of transformations.



(a) Describe the transformations _____

(b) State the composition of transformations in function notation _____

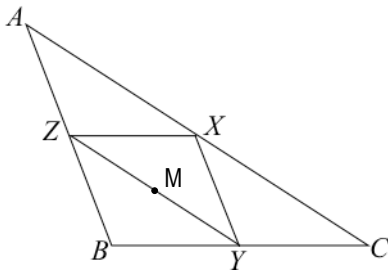
(c) List each set of corresponding sides
 _____ → _____ → _____, _____ → _____ → _____, _____ → _____ → _____

(d) List each set of corresponding angles
 _____ → _____ → _____, _____ → _____ → _____, _____ → _____ → _____

(e) Circle the correct congruence statement and explain why it is the correct statement.

$\triangle CAB \cong \triangle A''B''C''$ $\triangle ABC \cong \triangle B''A''C''$ $\triangle CBA \cong \triangle C''B''A''$

(7) All of the triangles in the diagram below are congruent. Choose a triangle to be the original figure and then write a composition of transformations that will map the triangle you chose onto another triangle in the figure. Your composition must use the other 2 triangles in the diagram as steps to get to the final image.



Describe: _____

Composition in function notation:

3.11 HW

Name (print first and last) _____

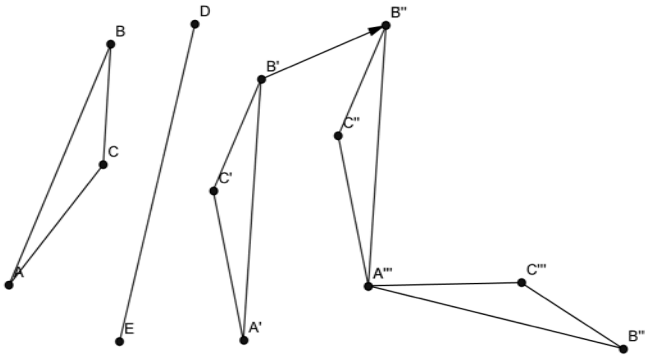
Per _____ Date: 10/31 due 11/1

3.11 Rigid Transformations: Congruence

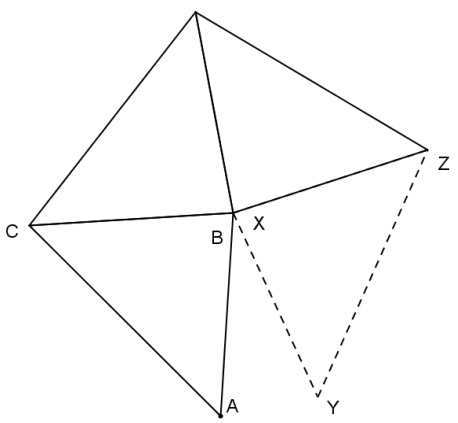
Geometry Regents 2013-2014 Ms. Lomac

For each diagram below, (a) Describe the composition of transformations, (b) Write the composition of transformations in function notation, (c) Write a congruence statement from the original to the final image.

(1)



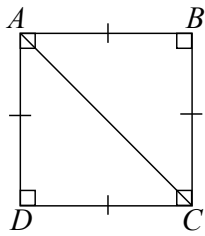
(2)



3.11 Exit Ticket

Name _____ Per _____

In square ABCD, diagonal AC is drawn. The triangles are reflections.



Write a congruence statement for the triangles: _____

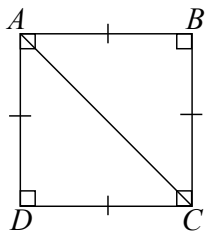
Write the function notation for the reflection: _____

- 😊 I got this! 🏆
- 😊 I can with a bit of help 🏆
- 😊 I will, given lots of help 🏆
- 😊 I can't 🏆
- 😊 I won't bother to 🏆
- 😊 I refuse to 🏆

3.11 Exit Ticket

Name _____ Per _____

In square ABCD, diagonal AC is drawn. The triangles are reflections.



Write a congruence statement for the triangles: _____

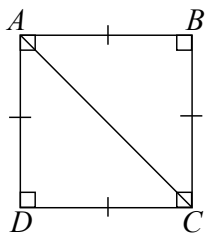
Write the function notation for the reflection: _____

- 😊 I got this! 🏆
- 😊 I can with a bit of help 🏆
- 😊 I will, given lots of help 🏆
- 😊 I can't 🏆
- 😊 I won't bother to 🏆
- 😊 I refuse to 🏆

3.11 Exit Ticket

Name _____ Per _____

In square ABCD, diagonal AC is drawn. The triangles are reflections.



Write a congruence statement for the triangles: _____

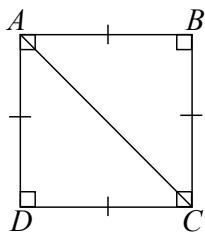
Write the function notation for the reflection: _____

- 😊 I got this! 🏆
- 😊 I can with a bit of help 🏆
- 😊 I will, given lots of help 🏆
- 😊 I can't 🏆
- 😊 I won't bother to 🏆
- 😊 I refuse to 🏆

3.11 Exit Ticket

Name _____ Per _____

In square ABCD, diagonal AC is drawn. The triangles are reflections.



Write a congruence statement for the triangles: _____

Write the function notation for the reflection: _____

- 😊 I got this! 🏆
- 😊 I can with a bit of help 🏆
- 😊 I will, given lots of help 🏆
- 😊 I can't 🏆
- 😊 I won't bother to 🏆
- 😊 I refuse to 🏆