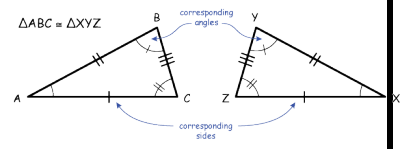


Name _____ Per _____

LO: I can identify corresponding parts, write congruence statements, and explain how transformations and congruence are related.



DO NOW On the back of this packet

(1) Need to know: Corresponding parts

Correspondence can be thought of as a "pairing" of points, segments, or angles 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

Right Shoe: _____

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

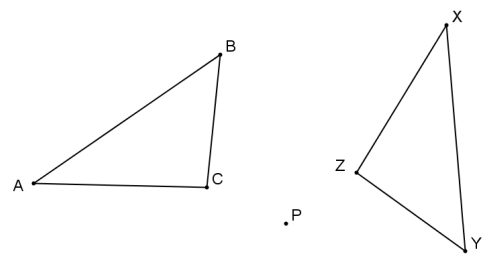
- (d) Like the shoes, corresponding parts of figures do not have to be exactly the same – congruent – however, they always will be when a figure undergoes a rigid transformation because _____

(2) Identifying corresponding parts You may use transparencies to help you see each correspondence.

transparencies, dry erase markers, erasers

- 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 _____



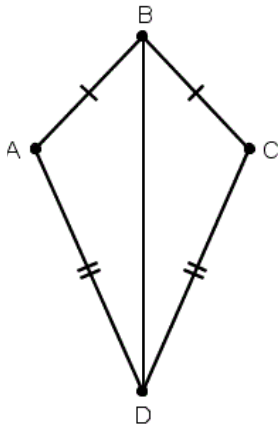
Based on the corresponding parts above, write a congruence statement for the triangles _____

Write the function notation for the transformation _____

(3) Identifying corresponding parts and writing congruence statements

(a) The triangles in the figure below are congruent by a _____ across _____.

List the corresponding sides and angles.



Sides: _____ → _____, _____ → _____, _____ → _____

Angles: _____ → _____, _____ → _____, _____ → _____

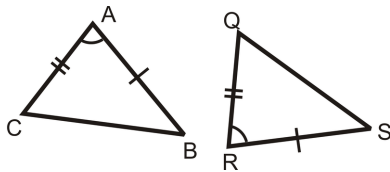
Are the corresponding parts congruent? _____ because _____

Write a triangle congruence statement: _____

(b) Corresponding parts are not ALWAYS congruent. For each pair of triangles,

(1) List corresponding sides and angles

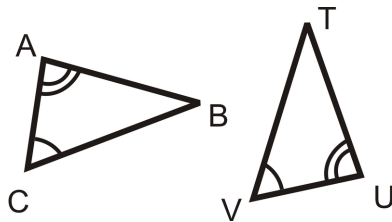
(2) Write a triangle congruence statement if there is a place that says “triangles”



Sides:

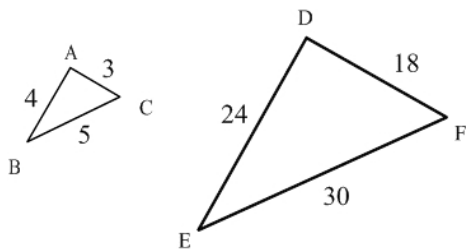
Angles:

Triangles:



Sides:

Angles:



Sides:

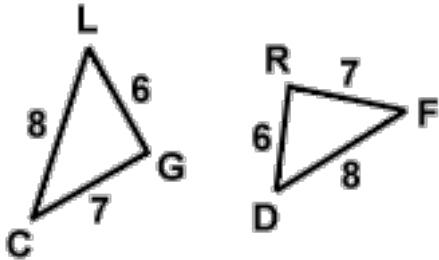
Angles

(4) **Exit Ticket**

ON THE LAST PAGE

(5) **Homework**

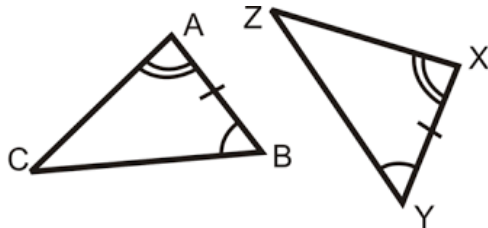
(1) For each pair of figures, name the corresponding segments (3) and angles (3) and then write a triangle congruence statement.



Sides:

Angles:

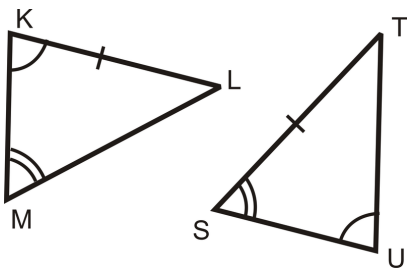
Triangles:



Sides:

Angles:

Triangles:



Sides:

Angles:

Triangles:

 (5) **Homework**

(2) Construct a 45° angle.

(HINT 1: construct a perpendicular bisector to get a 90° angle.)

(HINT 2: bisect one of the 90° angles to get 45°)

(3) Construct a 30° angle.

(HINT 1: construct an equilateral triangle to get a 60° angle.)

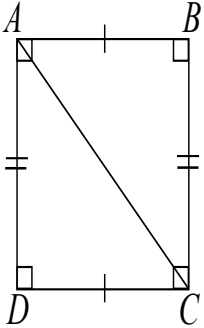
(HINT 2: bisect one of the 60° angles to get 30°)

EXIT TICKET Name _____ Date _____ Per _____

9.9L

(1) The LO (Learning Outcomes) are written below your name on the front of this packet. Demonstrate your achievement of these outcomes by doing the following:

In rectangle $ABCD$, diagonal AC is drawn. One triangle is a rotation of the other around the midpoint of \overline{AC} .



List the corresponding segments: _____ corresponds to _____
 _____ corresponds to _____
 _____ corresponds to _____

Write a congruence statement for the triangles in the format $\triangle _ \cong \triangle _$.

(2) Add to number 2 in the Do Now – you might see humor where you did not earlier.

(1) Describe what congruence means and draw a picture that illustrates two figures that are congruent.

(2) Describe what is happening in this cartoon. If you think you know why it's supposed to be funny, describe. If not, come back at the end of the lesson and give it a try.

