(DN)Copy and complete the statement:
  In lesson 4.1L, SAS stood for _____. What will
these abbreviations stand for?

ASA _____   SSA _____
SSS _____   AAA _____
AAS _____
HL _____ (this one is a challenge)

Name _____**Per**_____

 **LO:** I can determine whether or not two triangles can
         be proven congruent by any shortcuts besides
         SAS.

☐ (1)   **Congruence: A sequence of transformations**   **ASA**

transparencies, dry erase markers, eraser, compass, straightedge, tracing paper

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other.
Determine a sequence of transformations that maps △A'B'C' back to △ABC. Write a description and justification
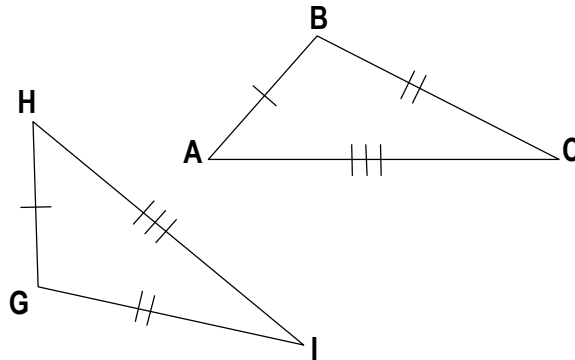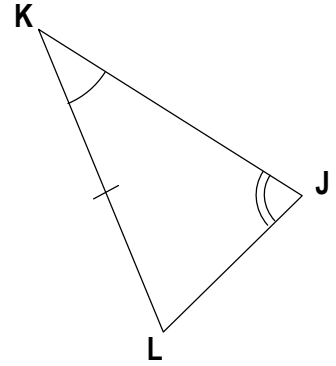for each step in the sequence of transformations.
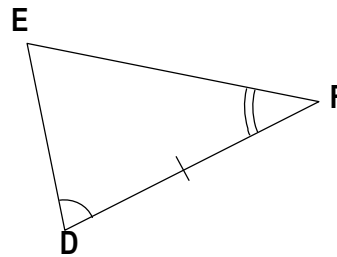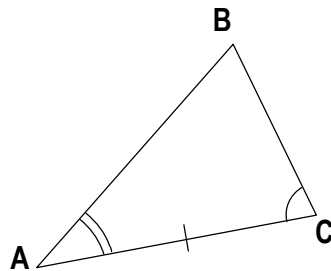
ASA does / does not guarantee that 2 triangles are congruent.

☐ (2)

transparencies, dry erase markers, eraser, compass, straightedge, tracing paper

Congruence: A sequence of transformations   **SSS**

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps △HGI to △ABC. Write a description and justification for each step in the sequence of transformations.
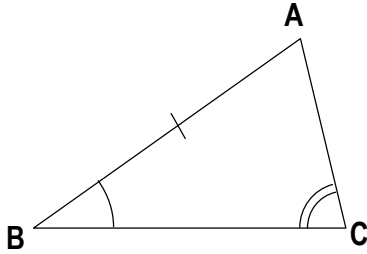
SSS does / does not guarantee that 2 triangles are congruent.

4.3L

□ (3)

transparencies, dry erase markers, eraser, compass, straightedge, tracing paper

Congruence: A sequence of transformations   **AAS**

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps △LKJ to △ABC. Write a description and justification for each step in the sequence of transformations.

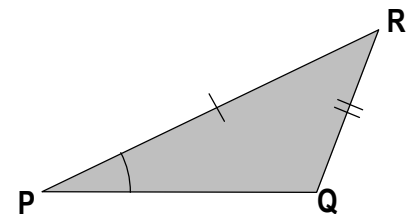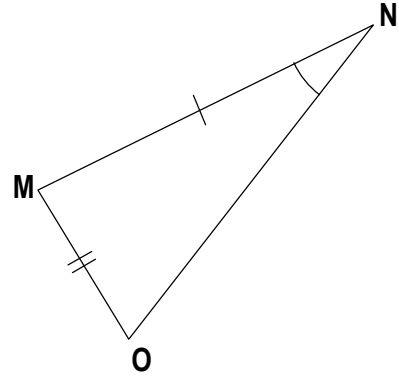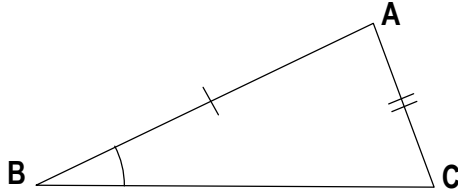**AAS does / does not guarantee that 2 triangles are congruent.**

☐ (4)

Congruence: A sequence of transformations   **SSA**

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps △MNO to △ABC. Write a description and justification for each step in the sequence of transformations.

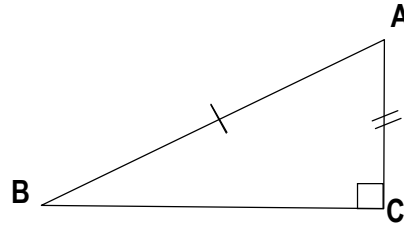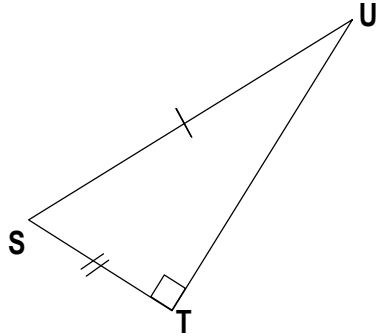**SSA does / does not guarantee that 2 triangles are congruent.**

☐ (5a)

transparen cies, dry erase markers, eraser, compass, straightedg e, tracing paper

Congruence: A sequence of transformations   **HL**

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps △SUT to △ABC. Write a description and justification for each step in the sequence of transformations.
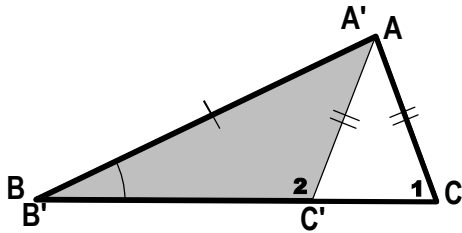

HL does / does not guarantee that 2 triangles are congruent.

☐ **(5b)**
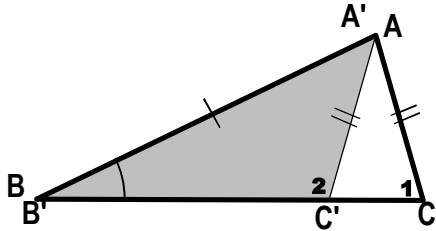
Why does SSA work for right triangles?

Focus on the shaded triangle and the large triangle (bold sides).

Angle 1 is an _____ angle
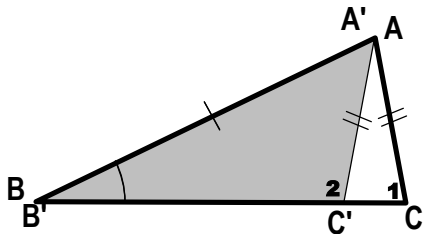
Angle 2 is an _____ angle

The shaded and large triangles **are** / **are not** congruent?

Angle 1 is an _____ angle

Angle 2 is an _____ angle

The shaded and large triangles **are** / **are not** congruent?

Angle 1 is an _____ angle
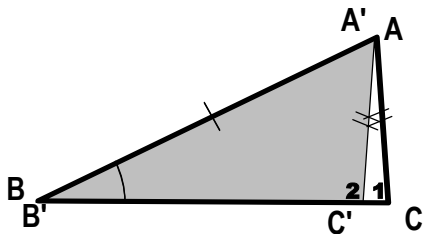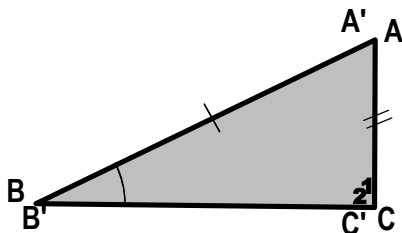
Angle 2 is an _____ angle

The shaded and large triangles **are** / **are not** congruent?

Angle 1 is an _____ angle

Angle 2 is an _____ angle

The shaded and large triangles **are** / **are not** congruent?

Angle 1 is an _____ angle

Angle 2 is an _____ angle

The shaded and large triangles **are** / **are not** congruent?

Because SSA is really a _____ a _____ and a _____ _____

**so we don't call it SSA, but instead we call it HL≅.**

☐ (6)

transparencies, dry erase markers, eraser, compass, straightedge, tracing paper

☐ **Congruence: A sequence of transformations**

AAA

Two shapes are congruent if there is a sequence of transformations (1 or more) that map one shape to the other. Determine a sequence of transformations that maps △XVW to △ABC. Write a description and justification for each step in the sequence of transformations.
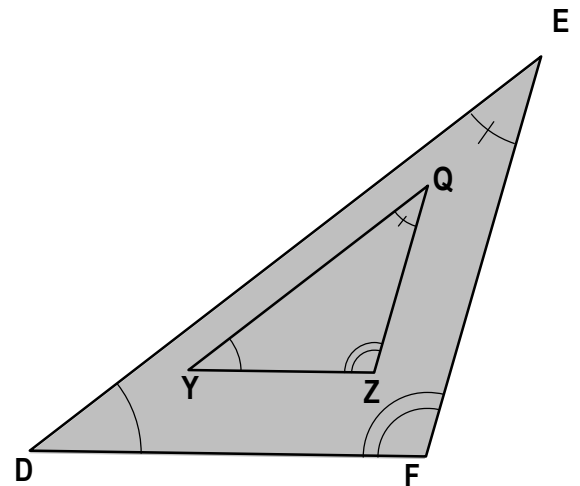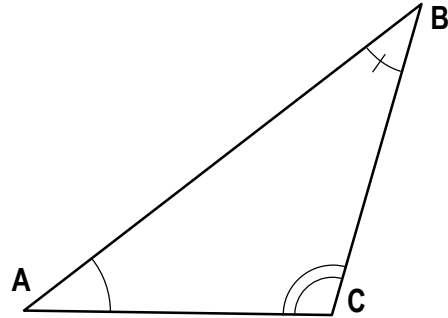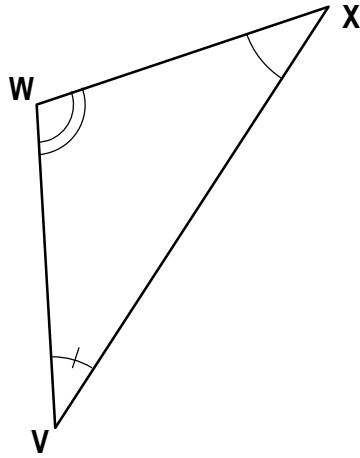
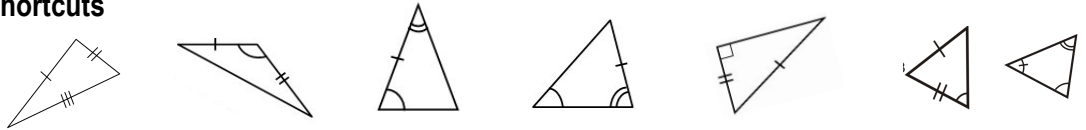**AAA does / does not guarantee that 2 triangles are congruent.**

(7) **Notes for congruent triangles and proof**

N13, N14
Scissors,
glue, tape,
description
s for N13,
N14

☐ Cut, arrange, check, and THEN glue or tape

---

(8) **Congruent Triangle Shortcuts**

☐ If I see:

My reason will be: _____ _____ _____ _____ _____ _____ _____

Complete each statement below:

1.

ΔABC ≅ Δ _____ by _____

2.

ΔABC ≅ Δ _____ by _____

3.

ΔABC ≅ Δ _____ by _____

4.

ΔGHJ ≅ Δ _____ by _____

5.

ΔABC ≅ Δ _____ by _____

6.

ΔABC ≅ Δ _____ by _____

7.

ΔABC ≅ Δ _____ by _____

8.

ΔDEF ≅ Δ _____ by _____

9.

ΔJKL ≅ Δ _____ by _____

10.

ΔABC ≅ Δ _____ by _____

11.

ΔABC ≅ Δ _____ by _____

12.

ΔMNO ≅ Δ _____ by _____

☐ (9) **Exit Ticket**

☐ Draw a pair of triangles for each triangle congruence shortcut. MARK CONGRUENT PARTS.

SAS   ASA   SSS   AAS   HL

☐ (10) **Homework:** Determine whether the triangles are congruent by SAS, ASA, SSS, AAS, or HL congruence.

(1)

(2)

(3)

_____

_____

_____

(4)

(5)

(6)

_____

_____

_____

(7)

(8)

(9)

_____

_____

_____