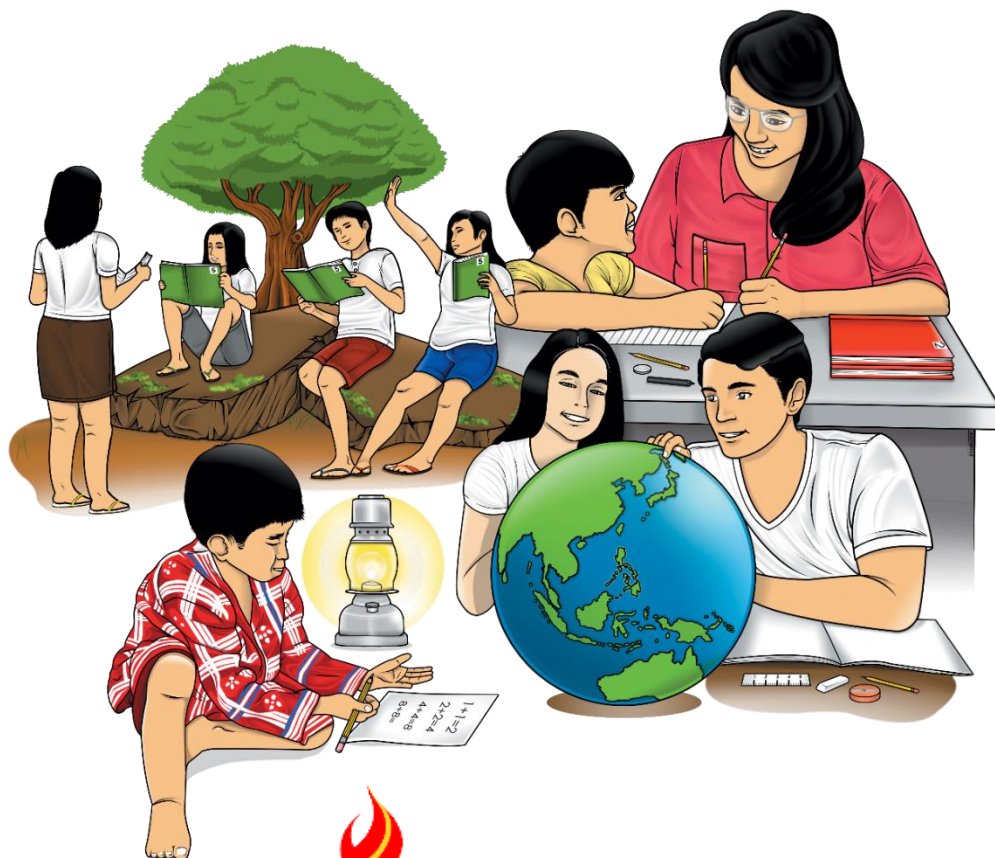


Mathematics

Quarter 3 – Module 4

Illustrating the SAS, ASA and SSS Congruence Postulates



Mathematics – Grade 8
Alternative Delivery Mode
Quarter 3 – Module 4 Illustrating the SAS, ASA and SSS Congruence Postulates
First Edition, 2020

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Mathematics

Quarter 3 – Module 4

**Illustrating the SAS, ASA and
SSS Congruence Postulates**

Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.



What I Need to Know

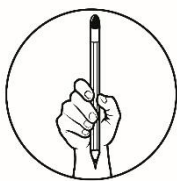
This module was designed and written with you in mind. It is here to help you master the skills of illustrating SAS, ASA and SSS congruence postulates. You are provided with varied activities to process the knowledge and skills learned and to deepen your understanding of the lesson. The scope of this module enables you to use it in many different learning situations. The lessons are arranged to follow the standard sequence of the course. But the order in which you read them can be changed to correspond with the textbook you are now using.

This module contains:

Lesson 1- Illustrating SAS, ASA and SSS Congruence Postulates

After going through this module, you are expected to:

1. identify included side and included angle;
2. determine the minimum requirements needed for congruent triangles;
3. illustrate the Side-Angle-Side (SAS), Angle-Side-Angle (ASA), and Side-Side-Side (SSS) congruence postulates; and
4. demonstrate creativity in testing triangle congruence using concrete objects.

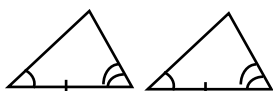


What I Know

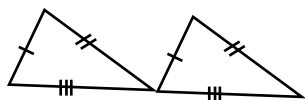
Directions: Choose the letter of the correct answer. Write the chosen letter on a separate sheet of paper.

- Given $\triangle ROF$, what is the included angle between \overline{RO} and \overline{OF} ?
 A. $\angle F$ C. $\angle R$
 B. $\angle O$ D. $\angle FRO$
- In $\triangle NET$, what side is included between $\angle N$ and $\angle T$?
 A. \overline{NT} C. \overline{ET}
 B. \overline{NE} D. \overline{TE}
- Which triangle congruence postulate states that “If the two sides and an included angle of one triangle are congruent to the corresponding two sides and the included angle of another triangle, then the triangles are congruent”?
 A. SSS C. SAS
 B. ASA D. AAS
- What triangle congruence postulate states that “If the two angles and the included side of one triangle are congruent to the corresponding two angles and an included side of another triangle, then the triangles are congruent”?
 A. SSS C. SAS
 B. ASA D. AAS
- What triangle congruence postulate states that “If the three sides of one triangle are congruent to the three sides of another triangle, then the triangles are congruent”?
 A. SSS C. SAS
 B. ASA D. AAS
- Which of the following illustrations represents the ASA congruence postulate?

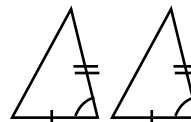
A.



B.



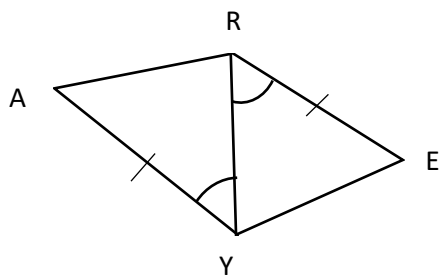
C.



D.

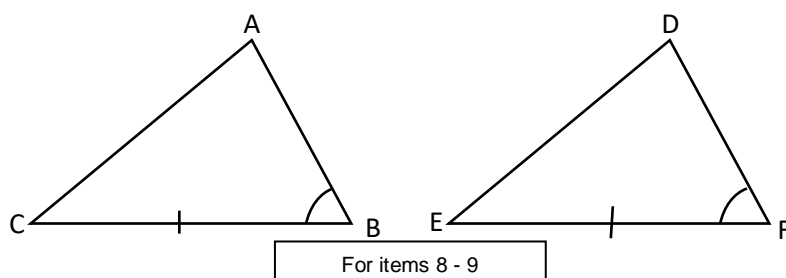


7. Corresponding congruent parts are marked. How can you prove that $\triangle RAY \cong \triangle REY$?

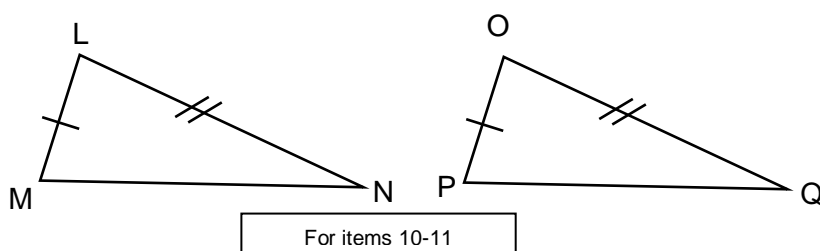


- A. ASA congruence postulate
B. SAA congruence postulate
C. SAS congruence postulate
D. SSS congruence postulate

For items 8-11, corresponding parts are marked in the pairs of congruent triangles below. Answer the questions that follow.



8. What other pair of corresponding congruent parts is needed to prove that the two triangles are congruent by ASA Congruence Postulate?
- A. $\angle C$ and $\angle D$
B. $\angle C$ and $\angle E$
C. $\angle C$ and $\angle F$
D. $\angle A$ and $\angle D$
9. Which pair of corresponding congruent sides would make the two triangles congruent by SAS Congruence Postulate?
- A. \overline{AC} and \overline{DF}
B. \overline{CB} and \overline{EF}
C. \overline{AB} and \overline{DF}
D. \overline{AB} and \overline{FD}

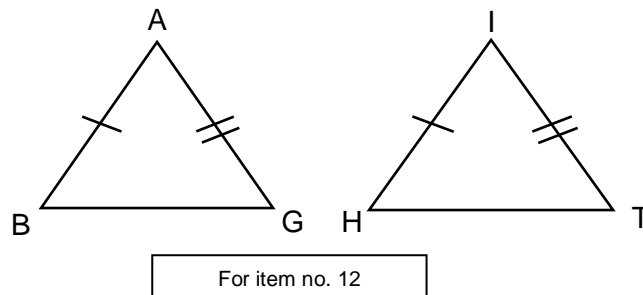


10. If the triangles are congruent by SSS congruence postulate, which pair of corresponding congruent sides is needed?
- A. \overline{ML} and \overline{PO}
B. \overline{MN} and \overline{PQ}
C. \overline{MO} and \overline{PL}
D. \overline{QO} and \overline{NL}

11. If $\angle L$ and $\angle O$ are congruent, which congruence postulate would prove that $\triangle MLN \cong \triangle POQ$?

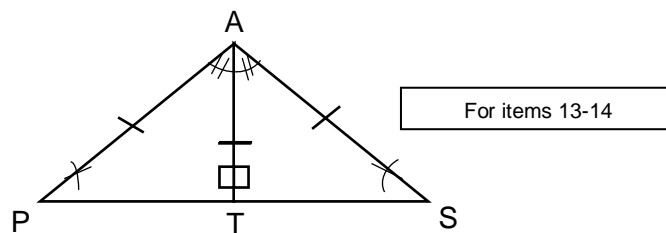
- A. SAS congruence postulate
- B. SSS congruence postulate
- C. ASA congruence postulate
- D. SAA congruence postulate

For items 12-14 consider the pairs of triangles below and answer the questions that follow.



12. By SAS congruence postulate, what triangle is congruent to $\triangle BAG$?

- A. $\triangle HIT$
- B. $\triangle TIH$
- C. $\triangle THI$
- D. $\triangle HTI$



13. If the triangles are congruent by SAS congruence postulate, which of the following is the correct congruence statement?

- A. $\triangle PAT \cong \triangle SAT$
- B. $\triangle PAT \cong \triangle TAP$
- C. $\triangle PAT \cong \triangle TAS$
- D. $\triangle PAT \cong \triangle STA$

14. What triangle is congruent to $\triangle APT$ applying ASA congruence postulate?

- A. $\triangle TAP$
- B. $\triangle SAT$
- C. $\triangle AST$
- D. $\triangle SAP$

15. Ianne knows that in $\triangle REL$ and $\triangle KEN$, $\overline{RE} \cong \overline{KE}$, $\overline{EL} \cong \overline{EN}$ and $\overline{RL} \cong \overline{KN}$, which postulate can he use to prove that the triangles are congruent?

- A. ASA congruence postulate
- B. SAS congruence postulate
- C. SAA congruence postulate
- D. SSS congruence postulate

Lesson**1****Illustrating the SAS, ASA, SSS
Congruence Postulates**

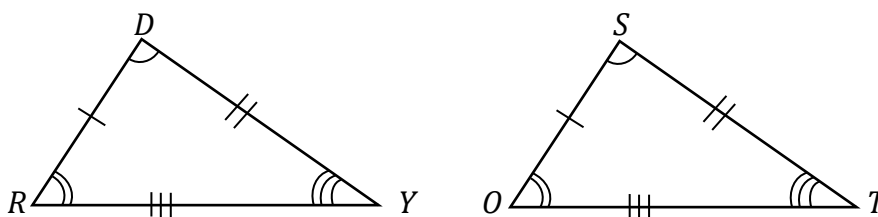
In the previous module, you have defined what congruent triangles are. You have learned that in order to say that two triangles are congruent, we must show that all six pairs of corresponding parts of the two triangles are congruent. As you go through this module, think about this question: How can we show that two triangles are congruent using fewer pairs of congruent corresponding parts?

***What's In***

Let us start this module by reviewing the important concepts you have learned in the definition of triangle congruence.

Direction: Refer to the given pair of congruent triangles and answer as required.
Use a separate sheet of paper.

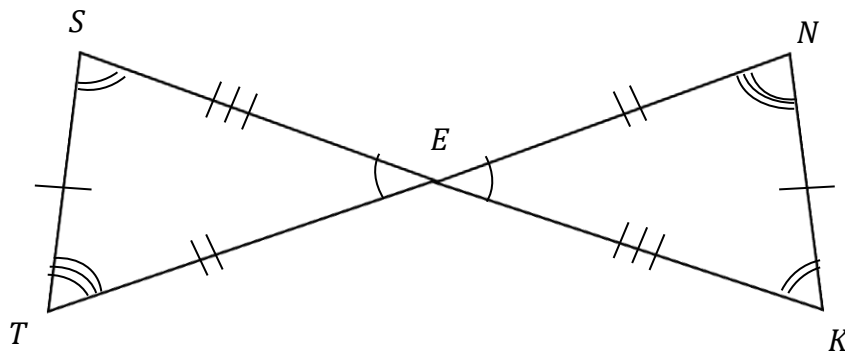
For items 1-6, given $\triangle DRY \cong \triangle SOT$, give the corresponding part congruent to each given side or angle below.



1. $\overline{RD} \leftrightarrow$ _____
2. $\overline{RY} \leftrightarrow$ _____
3. $\overline{ST} \leftrightarrow$ _____

4. $\angle Y \leftrightarrow$ _____
5. $\angle O \leftrightarrow$ _____
6. $\angle D \leftrightarrow$ _____

For items 7-12, given $\triangle SET \cong \triangle KEN$, give all the corresponding congruent parts.



7. _____

10. _____

8. _____

11. _____

9. _____

12. _____

Questions:

1. Were you able to identify all the corresponding congruent parts of the two congruent triangles?
2. From the given pairs of congruent triangles, how many pairs of corresponding congruent parts are there?

Remember

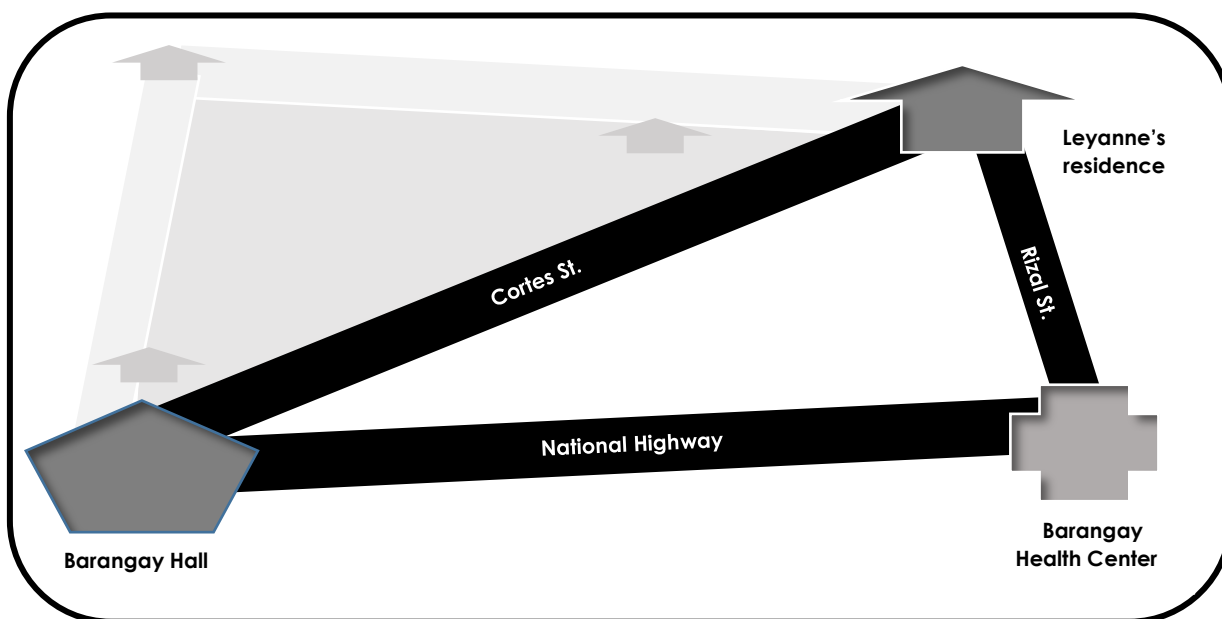
In a pair of congruent triangles, there are three corresponding congruent sides and three corresponding congruent angles.



What's New

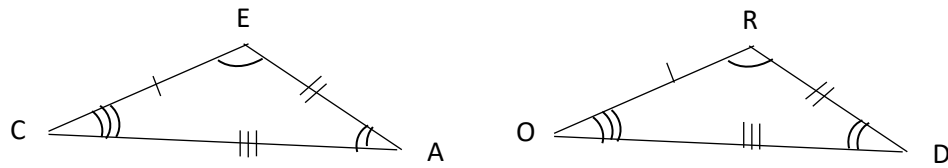
Where am I?

- I. Consider the location map below. Answer the questions that follow. Write your answers in a separate sheet of paper.

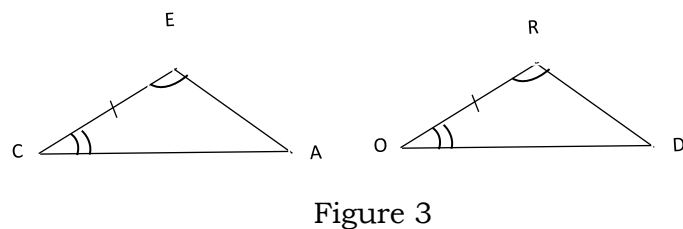
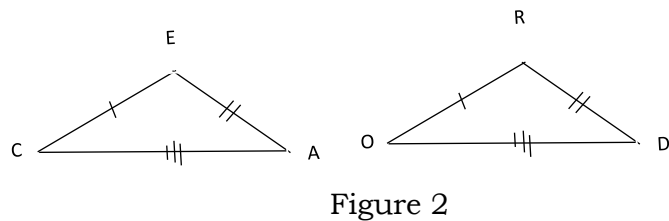
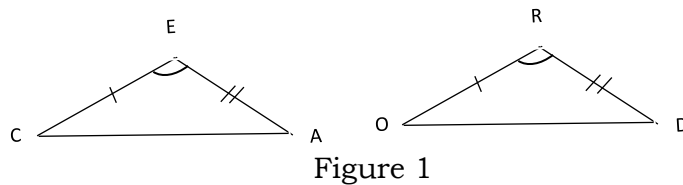


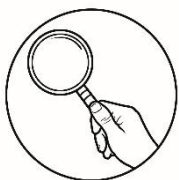
- A. Identify the following places:
1. The corner between Cortes St. and Rizal St.
 2. The corner between Rizal St. and the National Highway.
 3. National Highway and Cortes St.
- B. Identify the street common to each places:
1. Leyanne's residence and the Barangay Health Center
 2. Barangay Hall and Leyanne's residence
 3. Barangay Hall and the Barangay Health Center
- II. Refer to the location map in the previous item, rename Leyanne's House as A, Barangay Hall as B and the Barangay Health Center as C.
1. What is the name of the triangle formed?
 2. What are the vertices of the triangle?
 3. What are the sides of the triangle?
 4. What angle is between \overline{AB} and \overline{AC} ? between \overline{BC} and \overline{CA} ? between \overline{BA} and \overline{BC} ?
 5. What side is common to $\angle A$ and $\angle B$? to $\angle B$ and $\angle C$? to $\angle C$ and $\angle A$?

- III. Refer to the pair of triangles below. Answer the questions that follow.
Given $\triangle ECA \cong \triangle ROD$.



1. How many pairs of corresponding congruent sides are there?
2. How many pairs of corresponding congruent angles are there?
3. How many pairs of corresponding congruent parts are there?
4. Suppose only three of the corresponding congruent parts of $\triangle ECA$ and $\triangle ROD$ are marked as illustrated below, can you still say that $\triangle ECA \cong \triangle ROD$? Explain briefly.





What is It

Congruent triangles are defined by six corresponding congruent parts (three corresponding congruent sides and three corresponding congruent interior angles). But you don't need to show all the six to prove that two triangles are congruent. Various groups of three will do to prove congruency of a pair of triangles. These minimum requirements will be illustrated and proven by the different triangle congruence postulates.

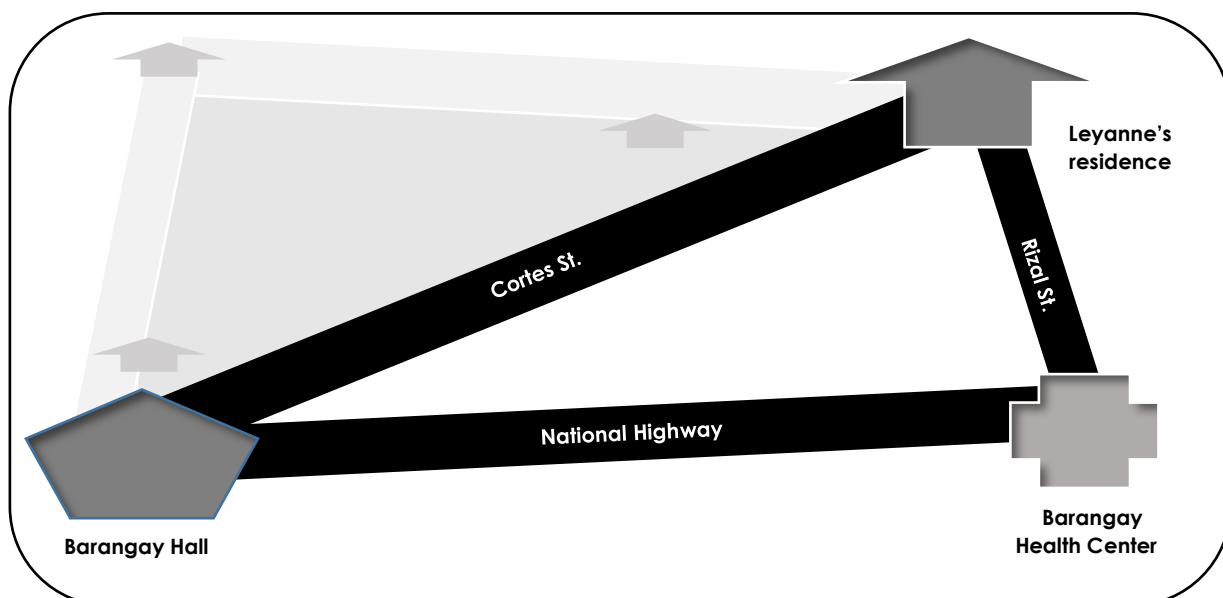
In order to show that two triangles are congruent given fewer information on their corresponding congruent parts, it is important to identify first the parts of a triangle in terms of their relative positions.

Definition of Included Angle and Included Side

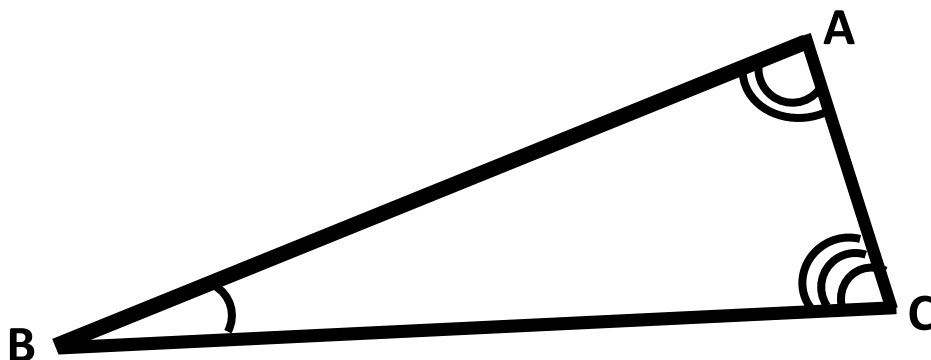
Included angle is the angle between two sides of a triangle

Included side is the side common to two angles of a triangle.

Looking back at the location map in the previous activity, Leyanne's residence for instance, is located at the corner between Rizal St. and Cortes St. The National Highway for example, is the side common to the Barangay Hall and the Barangay Health Center.



Upon renaming the places into points A, B and C, the resulting triangle is $\triangle ABC$



In $\triangle ABC$, $\angle A$ is the included angle between \overline{AB} and \overline{AC} , $\angle B$ is the included angle between \overline{AB} and \overline{BC} and $\angle C$ is the included angle between \overline{AC} and \overline{BC} . For the included sides, \overline{AB} is common to $\angle A$, $\angle B$, \overline{BC} to $\angle B$, and $\angle C$ and \overline{AC} to $\angle A$ and $\angle C$.

Triangle Congruence Postulates

These are the minimum requirements needed to prove the congruency of two triangles which are composed of various groups of three corresponding congruent parts. In order to understand further, study the activity provided in each congruence postulate.

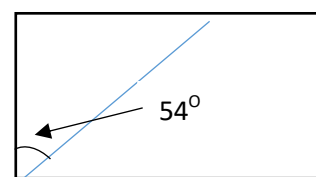
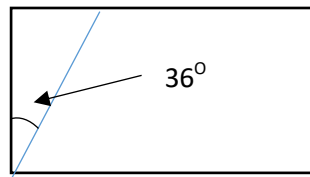
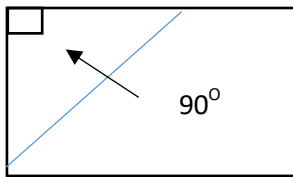
1. SAS (Side-Angle-Side) Congruence Postulate

Definition of SAS (Side-Angle-Side) Congruence Postulate

If two sides and an included angle of one triangle are congruent to the corresponding two sides and the included angle of another triangle, then the triangles are congruent.

To illustrate SAS congruence postulate, consider the activity below. To perform this, you need to prepare first the following:

1. Materials needed: sticks, protractor, ruler, paper, art paper.
2. Cut sticks into the following lengths:
 - 2 sticks 3 cm long - _____
 - 2 sticks 4 cm long - _____
 - 2 sticks 5 cm long - _____
3. Measure 2 angles 90° , 2 angles of 54° , 2 angles of 36° on the corners of three colored pieces of art papers, cut them out and label them.



Steps	Possible results	
	Triangle 1	Triangle 2
1. Take one 5 cm and one 3 cm sticks, place them on a piece of paper to form a 54° angle between them (use the angle cut out).		
2. Take another one 5 cm and one 3 cm sticks and also form a 54° angle between them.		
3. Draw a line to represent the third side. Repeat the process for the second triangle.		
4. Measure the length of the third side and the two remaining angles for each triangle.		

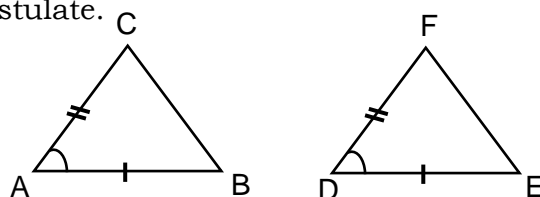
(Note that the possible results do not show the actual measurement of the length of sticks and angle measure of the cut-out art papers)

Did you get the same results? Did you find it hard to perform the activity? In case you encountered difficulty, you may need to go back to the step-by-step instructions above and redo the activity. If you were able to get the same results, then you are now ready to proceed.

Observe that there are only three corresponding congruent parts given (two sides and their included angle). Upon measuring the third side, the lengths are again equal and the measures of the remaining angles are also equal. In other words, all the six corresponding parts are congruent although only three of these

are given. So, it can be concluded that with only three corresponding congruent parts shown (two sides and their included angle), two triangles are congruent.

Another illustrative example: If $\overline{AB} \cong \overline{DE}$, $\angle A \cong \angle D$, $\overline{CA} \cong \overline{FD}$, then $\triangle ABC \cong \triangle DEF$ by SAS Congruence Postulate.



2. ASA (Angle-Side-Angle) Congruence Postulate

Definition of ASA (Angle-Side-Angle) Congruence Postulate

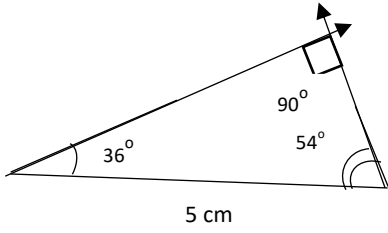
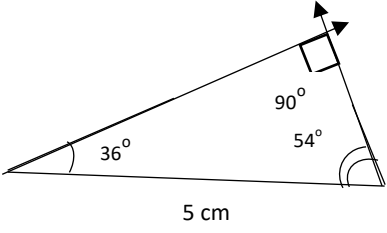
If two angles and the included side of one triangle are congruent to the corresponding two angles and an included side of another triangle, then the triangles are congruent.

To discover how this congruence postulate is possible, let us again perform another step-by-step activity using the same materials you have prepared above.

Are you ready?

Let us start.

Steps	Possible Results	
	Triangle 1	Triangle 2
1. On a piece of bondpaper, take one 5 cm stick and place two of the cut-out triangles on each end as shown. Repeat the process for the second triangle.		
2. Using a ruler, draw a segment along each of the angle. The two segments should intersect forming the last angle. Repeat the process for the second triangle.		

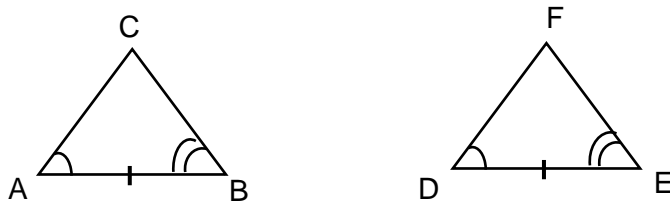
Steps	Possible Results	
	Triangle 1	Triangle 2
3. Measure the third angle and the lengths of the two sides in each triangle.		

(Note that the possible results do not show the actual measurement of the length of sticks and angle measure of the cut-out art papers)

Were you able to accomplish the activity? Did you get the same results? Again, you may need to redo the step-by-step activity if you encountered difficulty in arriving at the same results. Once you get it right, proceed to learning further about the ASA congruence postulate.

In the activity above, given only two angles with included side in Triangle 1 with the same measure to the two angles and included side of Triangle 2, notice that the measures of the third angles of the triangles are equal and the lengths of the two remaining corresponding sides are also equal. With this, all the six corresponding parts are congruent. Thus, it can be concluded that two triangles are congruent although there are only three corresponding congruent parts (two angles and their included side).

Another illustrative example: If $\angle B \cong \angle E$, $\overline{AB} \cong \overline{DE}$, $\angle A \cong \angle D$, then $\triangle ABC \cong \triangle DEF$ by ASA Congruence Postulate



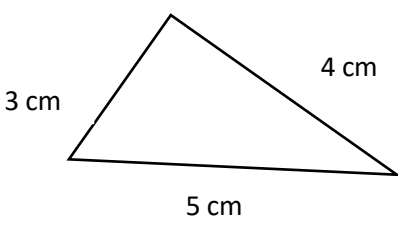
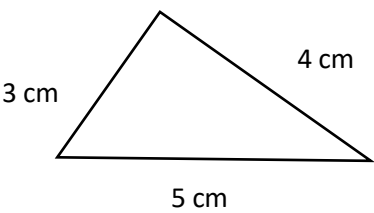
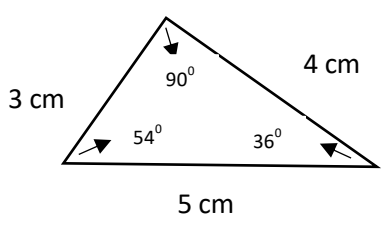
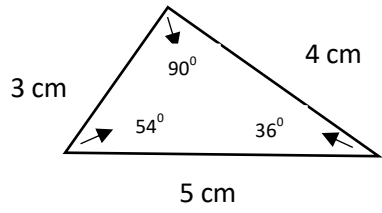
3. 3.

3. SSS (Side-Side-Side) Congruence Postulate

Definition of SSS (Side-Side-Side) Congruence Postulate

If three sides of one triangle are congruent to the corresponding three sides of another triangle, then the triangles are congruent.

Make use again of the same materials prepared previously and let us perform the following steps to discover the SSS congruence postulate.

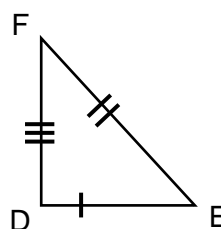
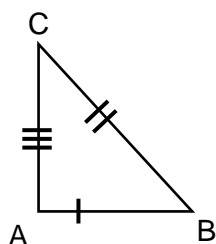
Steps	Possible Results	
	Triangle 1	Triangle 2
1. Put the three sticks of different lengths to form a triangle		
2. Form another triangle with the other set of sticks.		
3. Measure the angles of both triangles using a protractor.		

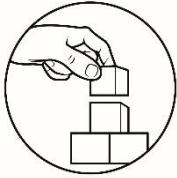
(Note that the possible results do not show the actual measurement of the length of sticks and angle measure of the cut-out art papers)

How was the activity? Were you able to come up with the same results? Note that you can always go back to the steps presented above in order to arrive at the same triangles. If you get the same triangles as illustrated above, then you are now ready to learn another triangle congruence postulate.

In the activity you have just done, the pair of triangles formed using the set of sticks shows three corresponding congruent sides. Notice also that the measure of the corresponding angles of Triangle 1 and Triangle 2 are equal, hence, corresponding angles are congruent. This means further that Triangle 1 and Triangle 2 are congruent. So by showing only three corresponding congruent sides, we can conclude that two triangles are congruent.

Example: If $\overline{AB} \cong \overline{DE}$, $\overline{BC} \cong \overline{EF}$, $\overline{CA} \cong \overline{FD}$, then $\triangle ABC \cong \triangle DEF$ by SSS Congruence Postulate





What's More

Activity 1: Include Me!

Directions: Given $\triangle KAI$, answer the questions that follow. Write your answer on a separate sheet of paper.

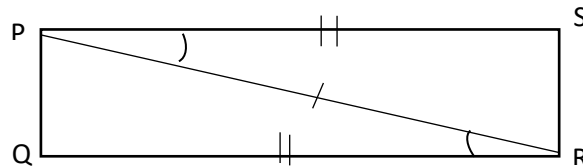
1. What is the included side between $\angle K$ and $\angle A$?
2. What is the included side between $\angle K$ and $\angle I$?
3. What is the included side between $\angle I$ and $\angle A$?
4. What is the included angle between \overline{KA} and \overline{AI} ?
5. What is the included angle between \overline{KI} and \overline{KA} ?
6. What is the included angle between \overline{KI} and \overline{AI} ?

Activity 2: You complete me!

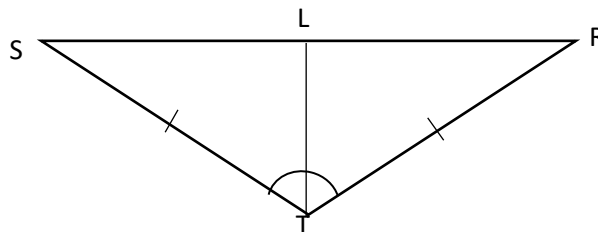
I. Complete the congruence statement using the indicated congruence postulate.

Part 1: SAS (Side-Angle-Side) Congruence Postulate

1. $\triangle PQR \cong \underline{\hspace{2cm}}$



2. $\triangle STL \cong \underline{\hspace{2cm}}$

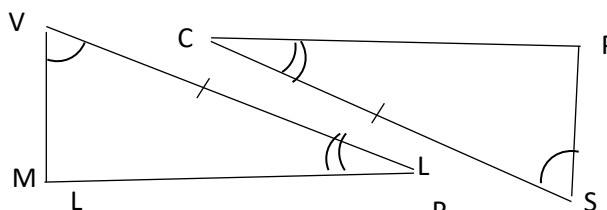


Questions:

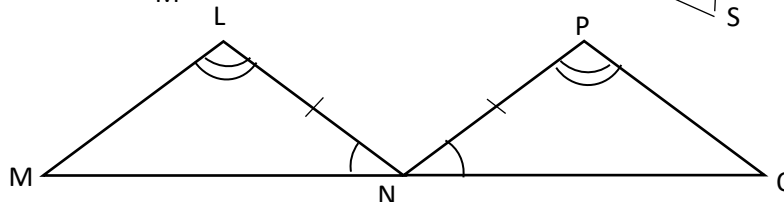
1. What are the three corresponding congruent parts in item 1? in item 2? Name them.
2. When can you say that two triangles are congruent by SAS congruence postulate?

Part 2: ASA (Angle-Side- Angle) Congruence Postulate

1. $\triangle VML \cong$ _____



2. $\triangle LMN \cong$ _____

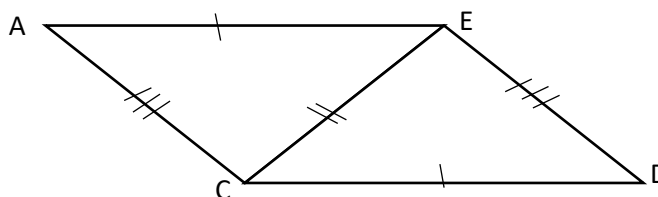


Questions:

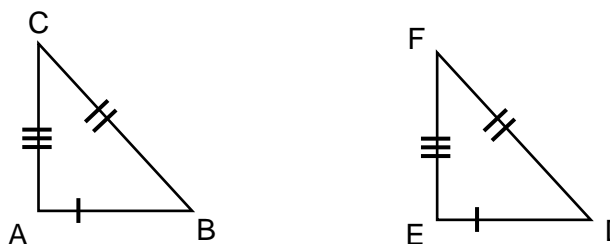
1. What are the three corresponding congruent parts in item 1? in item 2? Name them.
2. When can you say that two triangles are congruent by ASA congruence postulate?

Part 3: SSS (Side-Side-Side) Congruence Postulate

1. $\triangle ACE \cong$ _____



2. $\triangle CAB \cong$ _____

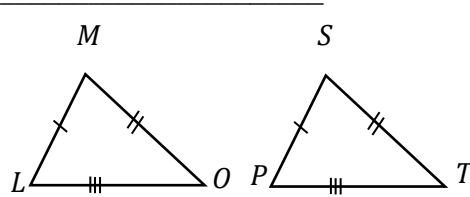


Questions:

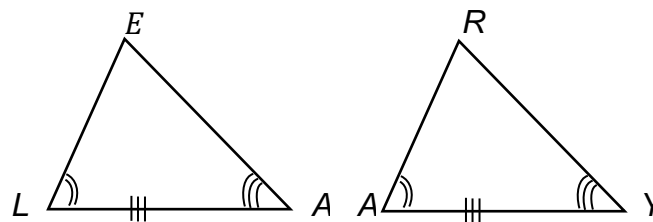
1. What are the three corresponding congruent parts in item 1? in item 2? Name them
2. When can you say that two triangles are congruent by SSS congruence postulate?

II. Complete the congruence statement in each pair of congruent triangles. Tell what congruence postulate is illustrated.

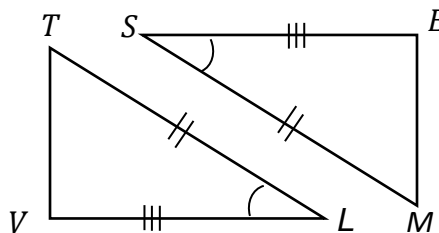
1. $\triangle MOL \cong$ _____



2. $\triangle ELA \cong$ _____



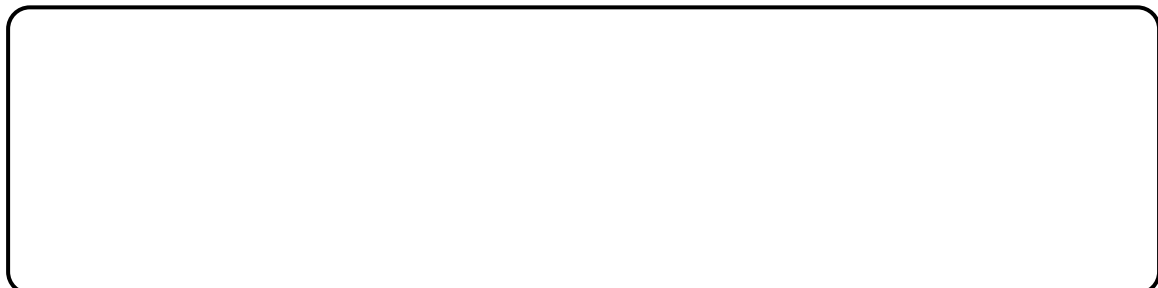
3. $\triangle LVT \cong$ _____



Activity 3. Draw and Mark!

Using a ruler and a protractor, draw pairs of congruent triangles whose names are given below and put identical markings on the corresponding congruent parts considering the specified congruence postulate. Use a separate sheet of paper for your answer.

1. $\triangle FIV \cong \triangle EIV$, by SSS (Side – Side-Side) congruence postulate



2. $\triangle PMO \cong \triangle SRQ$, by SAS (Side-Angle-Side) congruence postulate

3. $\triangle KRI \cong \triangle JUN$, by ASA (Angle-Side-Angle) congruence postulate



What I Have Learned

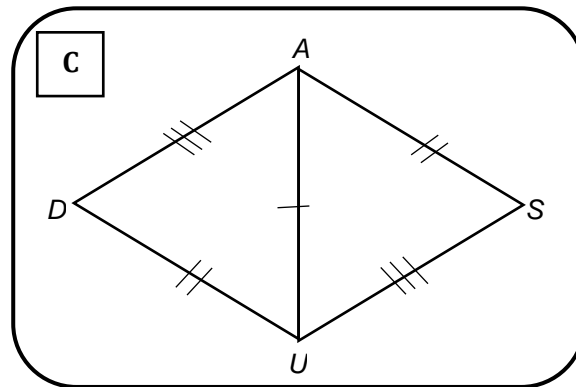
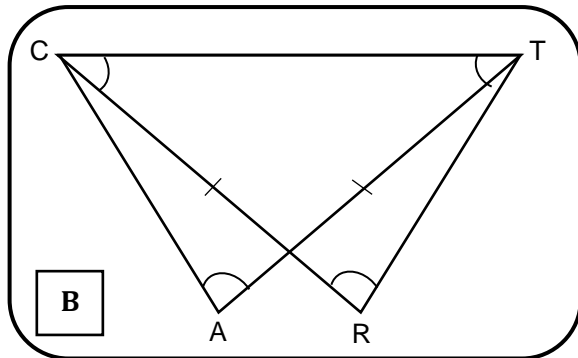
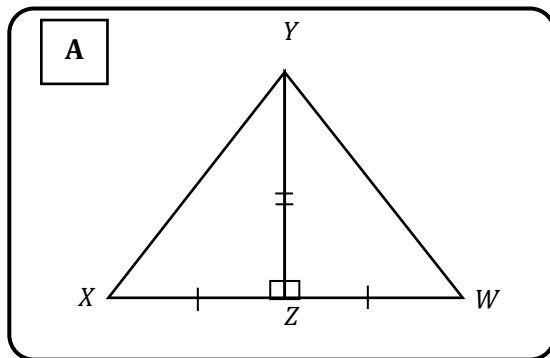
Activity 1: Missing you...

Directions: Fill in the blanks with the missing word/s to complete the sentences below. Write your answers on a separate sheet.

1. _____ is the angle between two sides of a triangle.
2. The side common to two angles of a triangle is called _____.
3. If the three sides of one triangle are congruent to the three _____ of another triangle, then the triangles are congruent by SSS (Side-Side-Side) congruence postulate.
4. In SAS (Side-Angle-Side) congruence postulate, the two sides and an _____ of one triangle are congruent to the corresponding two sides and the included angle of another triangle.
5. The _____ congruence postulate states that If two angles and the included side of a triangle are congruent to the corresponding two angles and an included side of another triangle, then the triangles are congruent.

Activity 2: Fill Me In

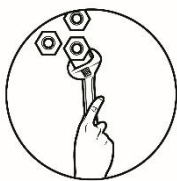
Directions: Use the pairs of triangles to complete the statements below.



First, I know that the pair of triangles in A are congruent by ____ Congruence Postulate. Hence, ____ \cong ____.

Second, I also know that the pair of triangles in B are congruent by ____ Congruence Postulate. Hence, ____ \cong ____.

Lastly, the pair of triangles in C, are congruent by ____ Congruence Postulate. Hence, ____ \cong ____.



What I Can Do

Where in the real world?

Identify and draw pictures of objects or any part of your house or structure outside where you can see triangles which are congruent by SAS, ASA and SSS congruence postulates. For each drawing, identify and name congruent triangles using any letter. Explain the significance of these congruent triangles in the real life setting.

Consider the rubric below for your output.

Criteria	Points				Rating
	4	3	2	1	
Appropriateness/ creativity	The output shows concrete example of triangle congruence in real life. It is clear and precise and ALL labels and markings are accurate	The output shows concrete example of triangle congruence in real life. It is clear and precise and MOST labels and markings are accurate	The output shows example of triangle congruence in real life. It is unclear and not precise and SOME labels and markings are accurate	The output shows example of triangle congruence in real life. It is unclear and not precise and there are No labels and markings	
Explanation/ Understanding of content	Insight and depth of content understanding are evident	Some depth of content understanding is evident	Lacks content understanding	does not give a clear understanding of the content	

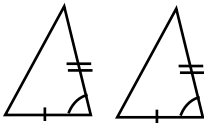


Assessment

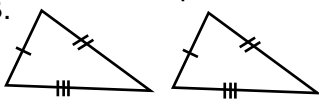
Directions: Choose the letter of the correct answer. Write the chosen letter on a separate sheet of paper.

1. Which of the illustrations below represents the ASA Congruence Postulate?

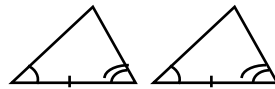
A.



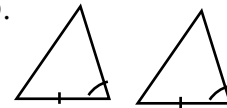
B.



C.

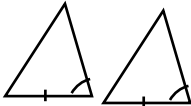


D.

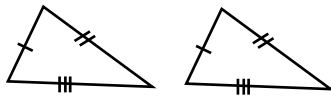


2. Which of the illustrations below represents the SAS Congruence Postulate?

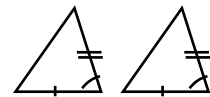
A.



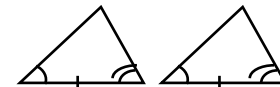
B.



C.



D.



3. Given $\triangle LOT$, what is the included angle between \overline{LO} and \overline{OT} ?

A. $\angle L$

C. $\angle T$

B. $\angle O$

D. $\angle TLO$

4. Given $\triangle MAD$, what is the included side between $\angle M$ and $\angle D$?

A. \overline{MA}

C. \overline{AD}

B. \overline{MD}

D. \overline{AM}

5. Given $\triangle RED$, what is the included side between $\angle E$ and $\angle D$?

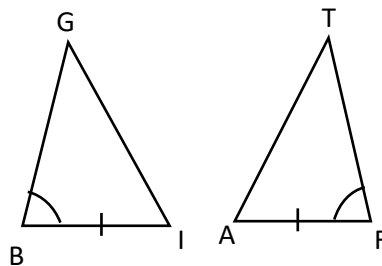
A. \overline{ED}

C. \overline{RD}

B. \overline{RE}

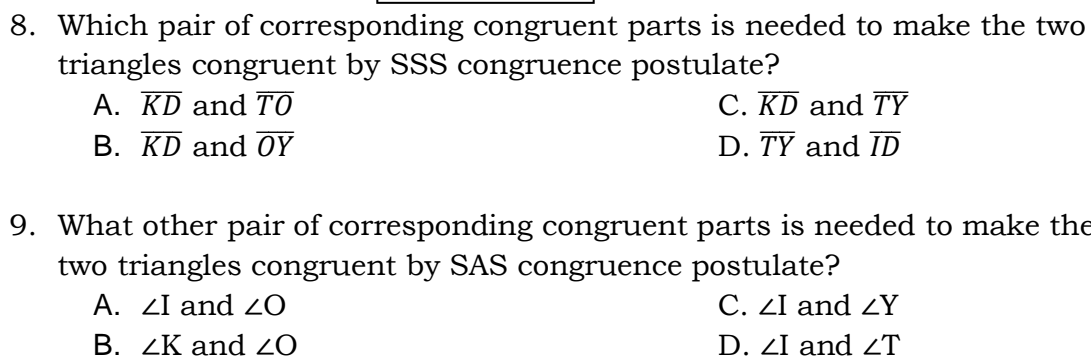
D. \overline{DR}

For items 6 -9, corresponding congruent parts are marked. Answer the questions that follow:



For items 6 - 7

7. What other pair of corresponding congruent part is needed to make the two triangles congruent by SAS Congruence Postulate?
- A. \overline{IG} and \overline{AT}
- B. \overline{BI} and \overline{FA}
- C. \overline{TF} and \overline{TA}
- D. \overline{GB} and \overline{TF}



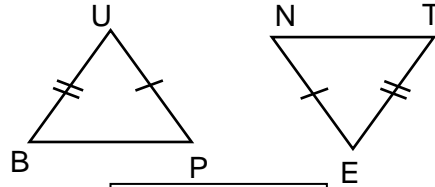
-

11. Which triangle is congruent to $\triangle POT$ by SAS Congruence Postulate?

- A. $\triangle LOT$
- B. $\triangle TOL$
- C. $\triangle OLT$
- D. $\triangle OTL$

12. If the triangles are congruent by ASA Congruence Postulate, what triangles congruent to $\triangle OPT$?

- A. $\triangle OTL$
- B. $\triangle LTO$
- C. $\triangle TOL$
- D. $\triangle OLT$



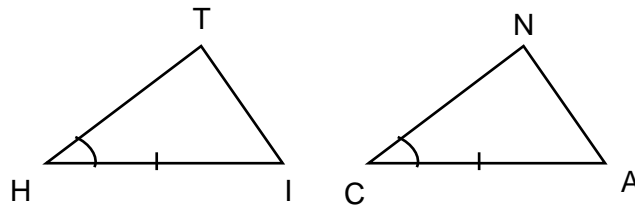
For items 13-14

13. What other pair of corresponding congruent sides is needed using SSS congruence postulate if $\triangle PUB \cong \triangle NET$?

- A. $\overline{BP} \cong \overline{NE}$
- B. $\overline{BP} \cong \overline{TN}$
- C. $\overline{NT} \cong \overline{PU}$
- D. $\overline{NT} \cong \overline{UB}$

14. Which pair of corresponding congruent angles is needed using SAS congruence postulate if $\triangle PUB \cong \triangle NET$?

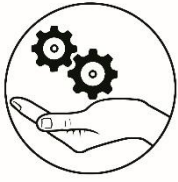
- A. $\angle U \cong \angle N$
- B. $\angle B \cong \angle T$
- C. $\angle P \cong \angle E$
- D. $\angle E \cong \angle U$



For item 15

15. Which of the following pairs of corresponding congruent sides is needed using SAS congruence postulate if $\triangle THI \cong \triangle NCA$?

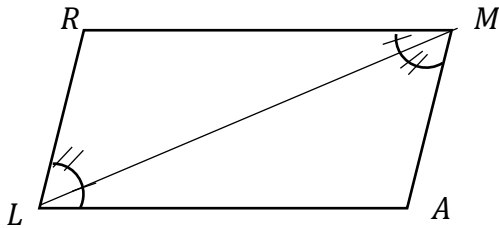
- A. $\overline{HI} \cong \overline{CA}$
- B. $\overline{TH} \cong \overline{NC}$
- C. $\overline{IT} \cong \overline{AN}$
- D. $\overline{IH} \cong \overline{CN}$



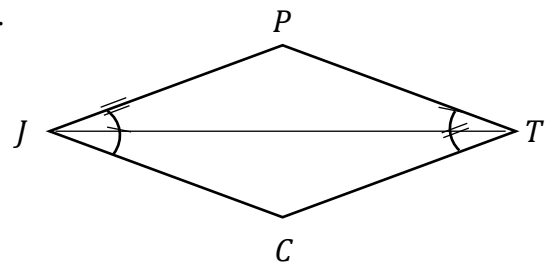
Additional Activities

State the postulate to prove each pair of triangles is congruent and give the complete congruency statement of the following pairs of triangles.

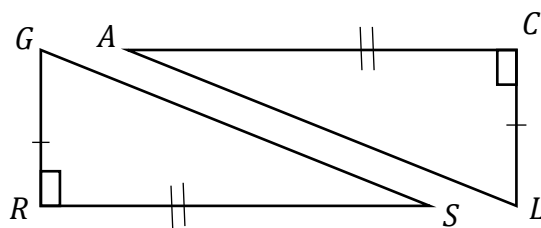
1.



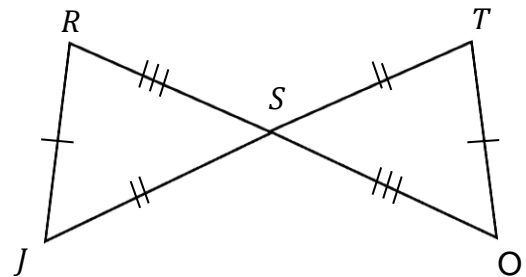
3.

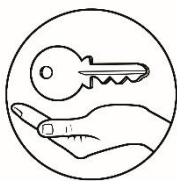


2.



4.





Answer Key

<p>What I Know</p> <p>1. B 2. A 3. C 4. B 5. A 6. A 7. C 8. B 9. C 10. B 11. A 12. A 13. A 14. C 15. D</p>	<p>What's In</p> <p>1. \underline{OS} 2. \underline{OT} 3. \underline{DY} 4. $\angle T$ 5. $\angle R$ 6. $\angle S$ 7-12 $\underline{SE} \leftrightarrow \underline{KE}$ $\underline{TE} \leftrightarrow \underline{NE}$ $\underline{TS} \leftrightarrow \underline{NK}$ $\angle T \leftrightarrow \angle N$ $\angle S \leftrightarrow \angle K$ $\angle SET \leftrightarrow \angle KEN$</p>	<p>What's New</p> <p>Actt. 1. Where am I</p> <p>I. 1. Leyanne's House 2. Barangay Health Center 3. Barangay Hall</p> <p>B. 1. Rizal St. 2. Cortes St. 3. National Highway</p> <p>II. 1. $\triangle ABC$ or $\triangle BCA$ or $\triangle CAB$ 2. A, B, C 3. $\underline{AB}, \underline{BC}, \underline{CA}$ 4. $\angle A, \angle C, \angle B$ 5. $\underline{AB}, \underline{BC}, \underline{CA}$</p>	<p>What's New</p> <p>III. 1. 3 2. 3 3. 6 4. Yes, because by measuring the three remaining corresponding parts, they are all equal which means that all the six corresponding parts are congruent.</p>
<p>What's More</p> <p>Activity 1. Include Me!</p> <p>1. \underline{KA} 2. \underline{KT} 3. \underline{LA} 4. $\angle A$ 5. $\angle K$ 6. $\angle I$</p> <p>Activity 2. You complete me!</p> <p>Part 1. 1. $\triangle RSP$ 2. $\triangle RTL$ Questions: 1. $\underline{PR} \approx \underline{RT}$, $\angle SPR \approx \angle TRP$, $\underline{PS} \approx \underline{RT}$ 2. $\underline{ST} \approx \underline{RT}$, $\angle STL \approx \angle RTL$, $\underline{TL} \approx \underline{TL}$, when corresponding sides and included angles are \approx Part 2. 1. $\triangle SPC$ 2. $\triangle PON$ Questions: 1. $\angle V \approx \angle S$, $\underline{VL} \approx \underline{SC}$, $\angle L \approx \angle C$ 2. $\angle L \approx \angle P$, $\underline{LN} \approx \underline{PN}$, $\angle LNM \approx \angle PNO$, when 2 corresponding angles and included sides are \approx Part 3 1. $\triangle DEC$ 2. $\triangle FED$ Questions: 1. $\underline{AC} \approx \underline{DE}$, $\underline{CE} \approx \underline{FE}$, $\underline{EA} \approx \underline{CD}$ 2. $\underline{CA} \approx \underline{FE}$, $\underline{AB} \approx \underline{ED}$, $\underline{CB} \approx \underline{FD}$, when 3 corresponding sides are \approx Part II 1. $\triangle STP$ – By ASA Congruence, 2.) $\triangle RAY$ – By ASA Congruence 3.) $\triangle SEM$ – By SAS Congruence Activity 3: Draw and Mark! Answers may vary</p>	<p>What's More</p> <p>II. 1. $\triangle STP$, SSS Congruence $\underline{LM} \approx \underline{PS}$, $\underline{MO} \approx \underline{ST}$, $\underline{LO} \approx \underline{PT}$, 2. $\triangle RAY$, ASA Congruence $\angle L \approx \angle A$, $\underline{LA} \approx \underline{AY}$, $\angle A \approx \angle Y$ 3. $\triangle SEM$, SAS Congruence $\underline{TL} \approx \underline{MS}$, $\angle L \approx \angle S$, $\underline{LV} \approx \underline{SE}$ vary Draw and Mark! Answers may vary What I Have Learned</p> <p>Activity 1: Missing You</p> <p>1. included angle 2. included side 3. sides 4. included angle 5. ASA</p> <p>Activity 2: Fill Me In</p> <p>1, SAS; $\underline{AYZX} \approx \underline{XYZW}$ 2. ASA; $\underline{ACAT} \approx \underline{ATRC}$ 3. SSS; $\underline{ABDU} \approx \underline{DUAS}$</p>	<p>Assessment</p> <p>1. C 2. C 3. B 4. B 5. A 6. C 7. D 8. C 9. A 10. A 11. A 12. D 13. B 14. D 15. B</p>	<p>Additional Activities</p> <p>1. ASA, $\triangle RML \approx \triangle ALM$ $\triangle MLR \approx \triangle LMA$, $\triangle LRM \approx \triangle MAL$ 2. SAS, $\triangle GRS \approx \triangle LCA$ $\triangle RSG \approx \triangle CAL$, $\triangle SGR \approx \triangle ALC$ 3. ASA, $\triangle JPT \approx \triangle TCJ$ $\triangle PTJ \approx \triangle CJT$, $\triangle TJP \approx \triangle JTC$ 4. SSS, $\triangle RJS \approx \triangle OTS$ $\triangle JSR \approx \triangle TSO$, $\triangle SRJ \approx \triangle SOT$</p>

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