

**SSS**  
**side-side-side**

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**SAS**  
**side-angle-side**

---

**HL**  
**hypotenuse-leg**

---

**ASA**  
**angle-side-angle**

---

**AAS**  
**angle-angle-side**

## Side-Side-Side CONGRUENCE POSTULATE

If three sides of one triangle are congruent to three sides of a second triangle, then the two triangles are congruent.

## Side-Angle-Side CONGRUENCE POSTULATE

If two sides and the included angle of one triangle are congruent to two sides and the included angle of a second triangle, then the two triangles are congruent.

## HYPOTENUSE-LEG CONGRUENCE THEOREM

If the hypotenuse and a leg of a right triangle are congruent to the hypotenuse and a leg of a second right triangle, then the two triangles are congruent.

## Angle-Side-Angle CONGRUENCE POSTULATE

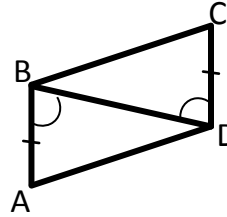
If two angles and the included side of one triangle are congruent to two angles and the included side of a second triangle, then the two triangles are congruent.

## Angle-Angle-Side CONGRUENCE THEOREM

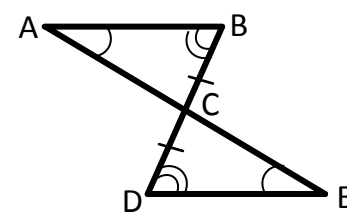
If two angles and a non-included side of one triangle are congruent to two angles and the corresponding non-included side of a second triangle, then the two triangles are congruent.

Can the triangles be proven congruent with the information given in the diagram? If so, state the postulate(s) or theorem(s) you would use.

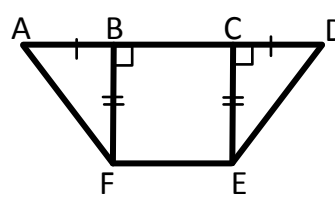
1.  $\triangle ABD, \triangle CDB$



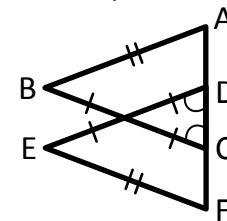
2.  $\triangle ABC, \triangle EDC$



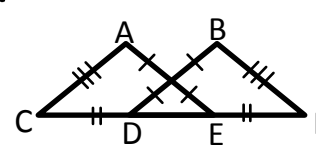
3.  $\triangle ABF, \triangle DCE$



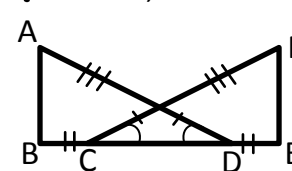
4.  $\triangle ABC, \triangle FED$



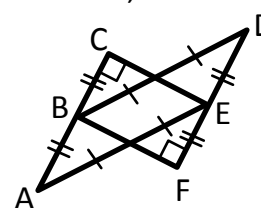
5.  $\triangle CAE, \triangle FBD$



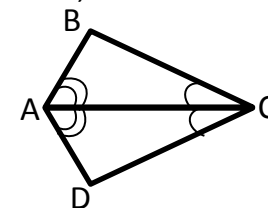
6.  $\triangle ABD, \triangle FEC$



7.  $\triangle ACE, \triangle DFB$



8.  $\triangle ABC, \triangle ADC$



PROVING TRIANGLES ARE CONGRUENT

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**angle-angle-side**

**Side-Side-Side  
CONGRUENCE POSTULATE**

**Side-ANGLE-Side  
CONGRUENCE POSTULATE**

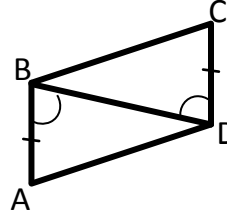
**HYPOTENUSE-LEG  
CONGRUENCE THEOREM**

**ANGLE-Side-ANGLE  
CONGRUENCE POSTULATE**

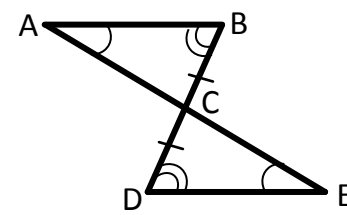
**ANGLE-ANGLE-Side  
CONGRUENCE THEOREM**

Can the triangles be proven congruent with the information given in the diagram? If so, state the postulate(s) or theorem(s) you would use.

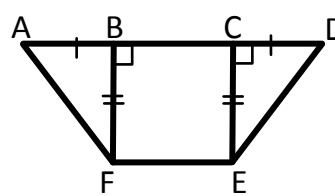
1.  $\triangle ABD, \triangle CDB$



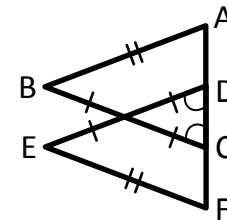
2.  $\triangle ABC, \triangle EDC$



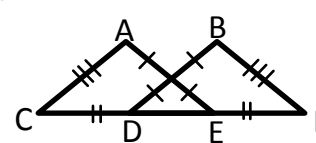
3.  $\triangle ABF, \triangle DCE$



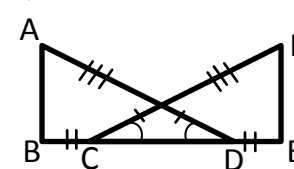
4.  $\triangle ABC, \triangle FED$



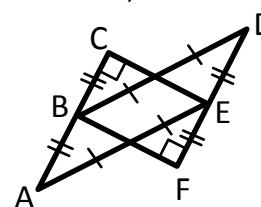
5.  $\triangle CAE, \triangle FBD$



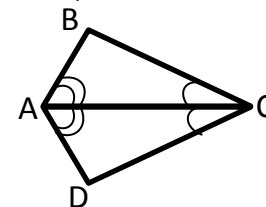
6.  $\triangle ABD, \triangle FEC$



7.  $\triangle ACE, \triangle DFB$



8.  $\triangle ABC, \triangle ADC$



**PROVING TRIANGLES ARE CONGRUENT**

Answer Key!

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## ANGLE-SIDE-ANGLE CONGRUENCE POSTULATE

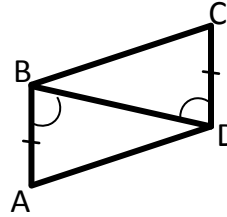
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## ANGLE-ANGLE-SIDE CONGRUENCE THEOREM

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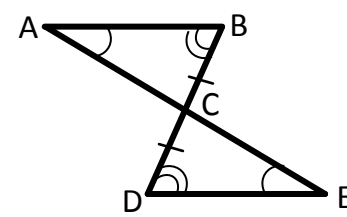
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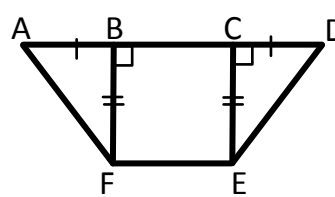
SAS

2.  $\triangle ABC, \triangle EDC$



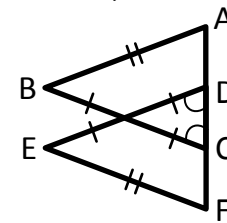
AAS

3.  $\triangle ABF, \triangle DCE$



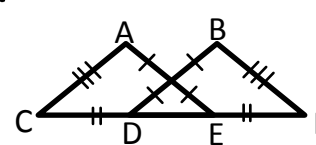
SAS

4.  $\triangle ABC, \triangle FED$



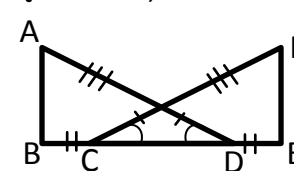
Cannot be proven.

5.  $\triangle CAE, \triangle FBD$



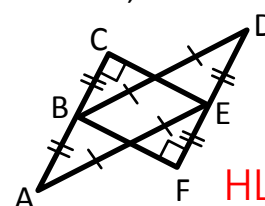
SSS

6.  $\triangle ABD, \triangle FEC$



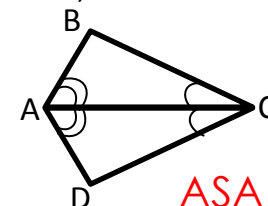
SAS

7.  $\triangle ACE, \triangle DFB$



HL

8.  $\triangle ABC, \triangle ADC$



ASA

PROVING TRIANGLES ARE CONGRUENT

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## Directions

Print pages 1 & 2 (3 & 4 if you prefer to have the students write the postulates and theorems; 5&6 for the answer key) front to back. On my printer, I use the option to print double sided and to flip along the short edge.

Have students fold the sheet in half and cut long the dotted lines to create the 5 tabs.

The final product should look like this:

