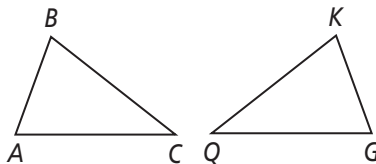


## Chapter 4 Find the Errors!

For use with Lessons 4-1 through 4-2

For each exercise, identify the error(s) in planning the solution or solving the problem. Then write the correct solution.

1. If  $\triangle ABC \cong \triangle GKQ$ , what are the congruent corresponding parts?

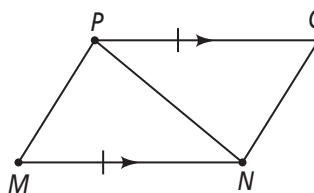


Sides:  $\overline{AC} \cong \overline{QG}$ ;  $\overline{AB} \cong \overline{QK}$ ;  $\overline{BC} \cong \overline{KG}$

Angles:  $\angle A \cong \angle Q$ ;  $\angle B \cong \angle K$ ;  $\angle C \cong \angle G$

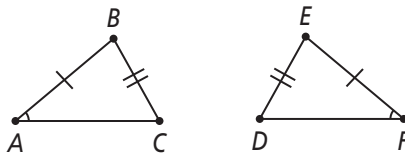
2. Given:  $\overline{PO} \parallel \overline{MN}$ ,  $\overline{PO} \cong \overline{MN}$

Prove:  $\triangle MPN \cong \triangle ONP$



Statements	Reasons
1) $\overline{PO} \parallel \overline{MN}$	1) Given
2) $\overline{PO} \cong \overline{MN}$	2) Given
3) $\overline{PN} \cong \overline{PN}$	3) Reflexive Property of $\cong$
4) $\triangle MPN \cong \triangle ONP$	4) SS Postulate

3. What other information do you need to prove the triangles congruent by SAS? Explain.



None. The triangles have two pairs of congruent sides ( $\overline{AB} \cong \overline{DE}$ , and  $\overline{BC} \cong \overline{EF}$ ) and one pair of congruent angles ( $\angle BAC \cong \angle EFD$ ). So, the triangles are congruent by SAS.

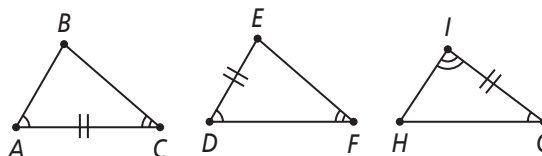
## Chapter 4 Find the Errors!

For use with Lessons 4-3 through 4-5

For each exercise, identify the error(s) in planning the solution or solving the problem. Then write the correct solution.

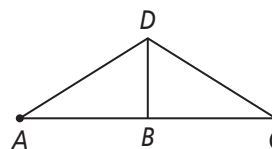
1. Which two triangles are congruent by ASA? Explain.

$\triangle ABC \cong \triangle DEF$  are congruent by ASA.  
They each have two pairs of congruent angles and one pair of congruent sides.



2. Given:  $\angle A \cong \angle C$   
 $\overline{BD}$  bisects  $\angle ADC$

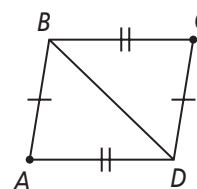
Prove:  $\triangle ADB \cong \triangle CDB$



Statements	Reasons
1) $\angle A \cong \angle C$	1) Given
2) $\overline{BD}$ bisects $\angle ADC$	2) Given
3) $\overline{BD} \cong \overline{BD}$	3) Reflexive Property of $\cong$
4) $\triangle ADB \cong \triangle CDB$	4) AAS Theorem

3. Given:  $\overline{AB} \cong \overline{CD}$   
 $\overline{AD} \cong \overline{BC}$

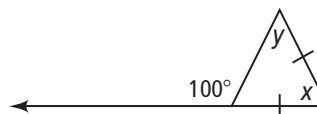
Prove:  $\angle A \cong \angle C$



Statements	Reasons
1) $\overline{AB} \cong \overline{CD}$	1) Given
2) $\overline{AD} \cong \overline{BC}$	2) Given
3) $\overline{BD} \cong \overline{BD}$	3) Reflexive Property of $\cong$
4) $\angle A \cong \angle C$	4) Corresponding parts of $\cong$ triangles are $\cong$ .

4. What are the values of  $x$  and  $y$ ?

$x = 80^\circ, y = 20^\circ$



## Chapter 4 Find the Errors!

For use with Lessons 4-6 through 4-7

For each exercise, identify the error(s) in planning the solution or solving the problem. Then write the correct solution.

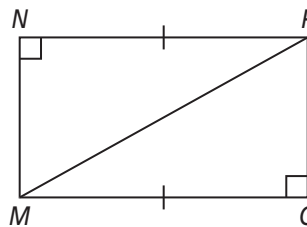
1. On the diagram shown,  $\angle N$  and  $\angle Q$  are right angles and  $\overline{NP} \cong \overline{MQ}$ .

Are  $\triangle NPM$  and  $\triangle QMP$  congruent?  
Write a paragraph proof.

$\angle N$  and  $\angle Q$  are right angles.

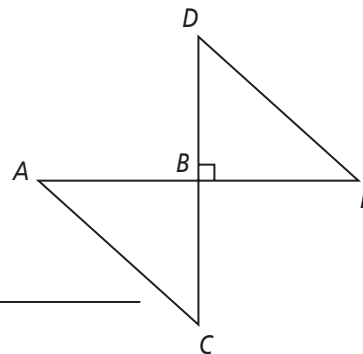
So,  $\triangle NPM$  and  $\triangle QMP$  are right triangles.

Also,  $\overline{NP} \cong \overline{MQ}$ . Therefore,  $\triangle NPM \cong \triangle QMP$   
by the Hypotenuse Leg Theorem.



2. Given:  $\overline{DC} \perp \overline{AE}$ ,  $\overline{DE} \cong \overline{AC}$   
 $B$  is the midpoint of  $\overline{AE}$

Prove:  $\triangle BDE \cong \triangle BCA$



Statements	Reasons
1) $\overline{DC} \perp \overline{AE}$	1) Given
2) $\overline{DE} \cong \overline{AC}$	2) Given
3) $B$ is the midpoint of $\overline{AE}$	3) Given
4) $\overline{AB} \cong \overline{BE}$	4) Definition of midpoint
5) $\triangle BDE$ and $\triangle BCA$ are right $\triangle$ s	5) Definition of right triangle
6) $\triangle BDE \cong \triangle BCA$	6) Hypotenuse Leg Theorem

3. In the diagram,  $\triangle ADE \cong \triangle DAB$ .  
What is their common side or angle?

$\angle C$

