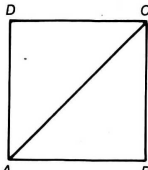
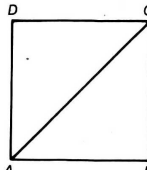
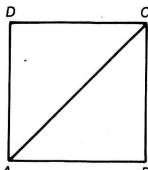
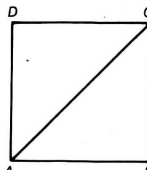
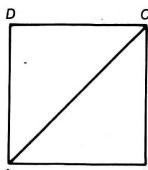


Practice 17

Chapter 4 Practice

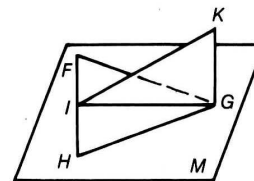
Can the two triangles be proved congruent? If so, name the theorem, definition, or postulate that can be used. If not, write *no congruence can be deduced*.

1)	2)
	
3)	4)
	
5)	
	

1. $\overline{DC} \parallel \overline{AB}, \overline{AD} \parallel \overline{CB}$ _____
2. $\overline{DA} \cong \overline{BC}, \overline{DC} \parallel \overline{AB}$ _____
3. $\overline{DA} \cong \overline{BC}, \overline{DA} \parallel \overline{CB}$ _____
4. $\overline{AD} \perp \overline{DC}, \overline{CB} \perp \overline{BA}, \overline{DA} \cong \overline{BC}$ _____
5. $\overline{DA} \cong \overline{DC}, \overline{BA} \cong \overline{BC}$ _____

Complete.

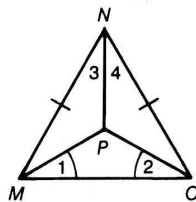
6. If $\triangle FGI \cong \triangle KIG$, then:
 - a. $\overline{FG} \cong$ _____
 - b. $m\angle F = m\angle$ _____
 - c. _____ = KG
 - d. $\triangle GIF \cong$ _____



Exs. 6-10

7. If \overline{KG} is perpendicular to plane M at G , name three right angles. _____, _____, _____
8. If $\overline{FG} \cong \overline{GH}, m\angle F = 60 + x$ and $m\angle H = 5x + 20$, then $x =$ _____.
9. If \overline{GI} is a median of $\triangle FGH$, then _____ = _____.
10. If \overline{GI} is both an altitude and a median of $\triangle FGH$, then $\triangle FGH$ is a(n) _____ triangle.

11. Given: $\overline{MN} \cong \overline{ON};$
 $\angle 1 \cong \angle 2$
 Prove: $\angle 3 \cong \angle 4$



Congruent Triangles

For use after Chapter 4

Complete.

1. Suppose $\triangle ABC \cong \triangle DEF$. Then:

- a. $\angle A \cong \angle$ _____ b. $\overline{AC} \cong$ _____ c. $\overline{FE} \cong$ _____ d. $\angle C \cong \angle$ _____

2. If $\overline{GI} \cong \overline{HI}$, then \angle _____ $\cong \angle$ _____.

3. If $\overline{IK} \perp \overline{GH}$, then \overline{IK} is a(n) _____ of $\triangle GHI$.

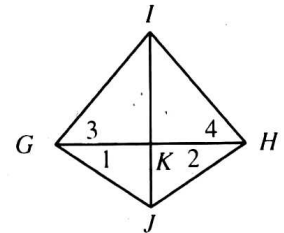
4. If J is on the perpendicular bisector of \overline{GH} , then

_____ \cong _____.

5. If K is on the bisector of $\angle GIH$, then K is equidistant from

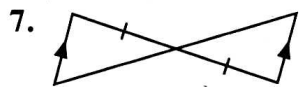
_____ and _____.

6. If $\angle 1 \cong \angle 2$, then _____ \cong _____.

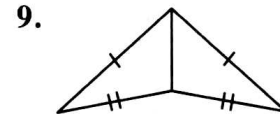


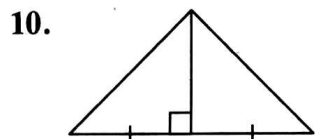
Exs. 2-6

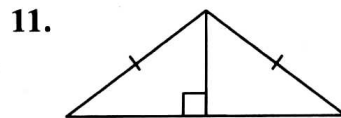
State which congruence method(s), SSS, SAS, ASA, AAS, or HL, can be used to prove the triangles congruent.

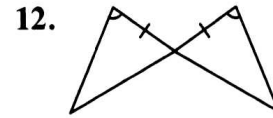










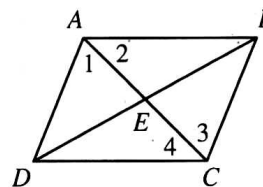


Supply the missing reasons in the key steps of the proof.

13. Given: $\overline{AB} \parallel \overline{DC}$; $\overline{AD} \parallel \overline{BC}$
 Prove: $\overline{AE} \cong \overline{CE}$; $\overline{DE} \cong \overline{BE}$

Key steps of proof:

1. $\overline{AB} \parallel \overline{DC}$; $\overline{AD} \parallel \overline{BC}$
2. $\angle 1 \cong \angle 3$;
 $\angle 2 \cong \angle 4$
3. $\triangle ADC \cong \triangle CBA$
4. $\overline{AD} \cong \overline{CB}$
5. $\triangle AED \cong \triangle CEB$
6. $\overline{AE} \cong \overline{CE}$; $\overline{DE} \cong \overline{BE}$



1. _____
2. _____
3. _____
4. _____
5. _____
6. _____