

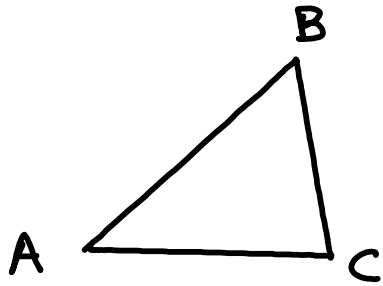
## Chapter Review



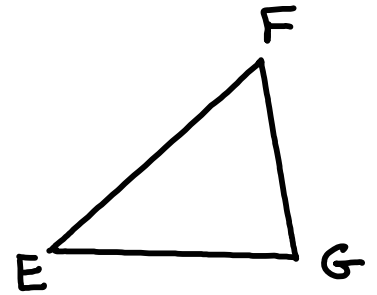
### Congruent Figures

1. *Congruent figures have the same size and shape*
2. **Corresponding parts of congruent figures are congruent**
3. *Isoceles Triangle Theorem-angle and side relationships*
4. *Ways we prove triangles congruent-*  
**SSS, SAS, ASA, AAS, HL**

## Properties of congruent figures



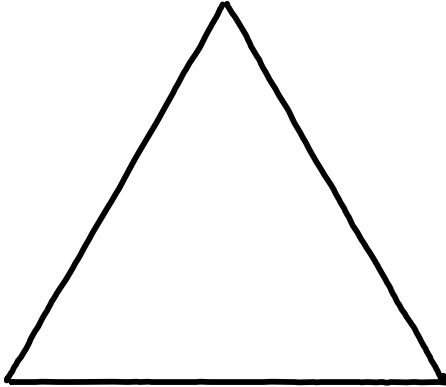
$$\triangle ABC \cong \triangle EFG$$



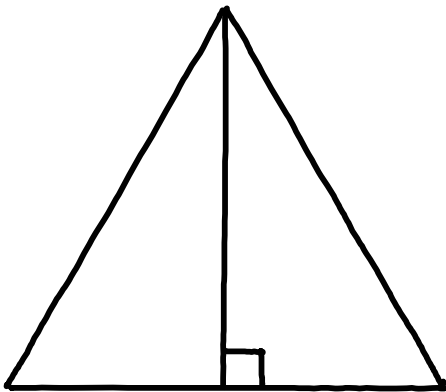
***important***

*Corresponding parts of congruent figures are congruent*

## Isosceles Triangle Theorem



*if two sides of a triangle are congruent then the angles opposite those sides are congruent*



*The bisector of the vertex angle on an isosceles triangle is perpendicular to the base at its midpoint*



## Proving Congruent Triangles: SSS and SAS

### the SSS (Side-Side-Side) Postulate

*if three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent*

### the SAS (Side-Angle-Side) Postulate

*if two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then the triangles are congruent*

## Proving triangles congruent using SSS and SAS

- 1. Study the information to determine if the SSS or SAS postulate can be applied*
- 2. Follow the general rules of proof- come up with a game plan; a series of steps that can lead a person that the triangles have SSS or SAS in common*
- 3. Use deductive logic and allowed statements of justification*



## Proving Congruent Triangles: ASA and AAS

### the ASA (Angle-Side-Angle) Postulate

*if two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then the triangles are congruent*

### the AAS (Angle-Angle-Side) Theorem

*if two angles and the non-included side of one triangle are congruent to the corresponding parts of another triangle, then the triangles are congruent*

## Proving triangles congruent using ASA and AAS

- 1. Study the information to determine if the ASA or AAS postulate can be applied*
- 2. Follow the general rules of proof- come up with a game plan; a series of steps that can lead a person that the triangles have ASA or AAS in common*
- 3. Use deductive logic and allowed statements of justification*



## Proving Congruent Triangles: HL Theorem

### the HL (Hypotenuse-Leg) Theorem

*if the hypotenuse and leg of one right triangle are congruent to the corresponding parts of another right triangle, then the triangles are congruent*

### Proving triangles congruent using HL Theorem

- 1. Study the information to determine if the HL Theorem can be applied*
- 2. Follow the general rules of proof- come up with a game plan; a series of steps that can lead a person that the triangles have the HL in common*
- 3. Use deductive logic and allowed statements of justification*