Congruent Triangles

Chapter Review

 Congruent Figures

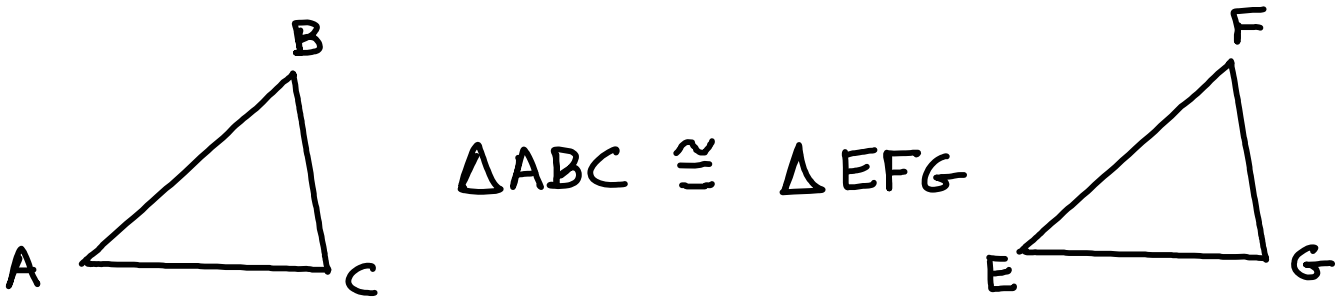
1. *Congruent figures have the same size and shape*

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***

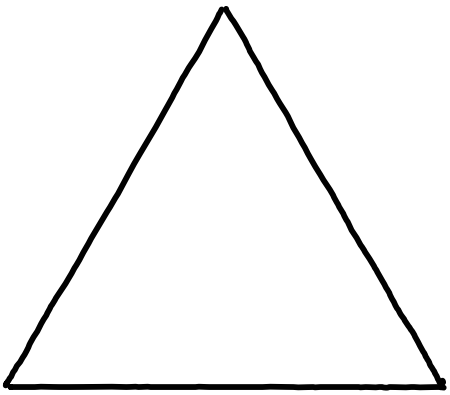
Properties of congruent figures



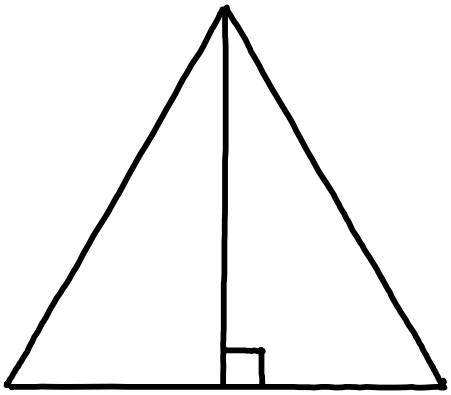
important

Corresponding parts of congruent figures are congruent

Isoceles Triangle Theorem



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



The bisector of the vertex angle 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*