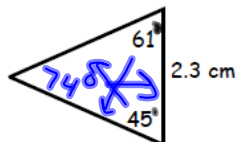
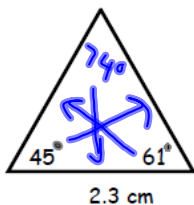


5.2 - 6.3 Triangle Congruence - ASA, SAS, SSS, AAS, HL

ASA (Angle-Side-Angle) Triangle

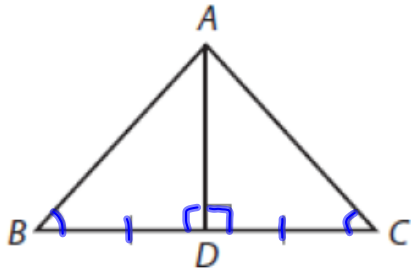
Congruence Theorem: If two angles and the included side of one triangle are congruent to two angles and the included side of another triangle, then the triangles are congruent by ASA.



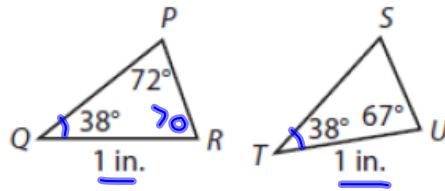
pg. 234

Determine whether the triangles are congruent by ASA. Explain your reasoning.

5. Yes by ASA



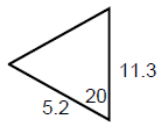
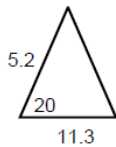
6. No because $\angle R \neq \angle U$



$$38 + 72$$

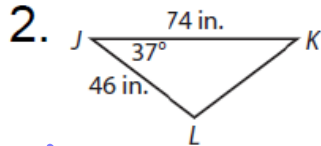
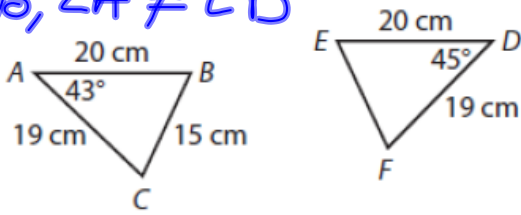
$$180 - 110 = 70$$

SAS (Side-Angle-Side) Triangle Congruence Theorem: If 2 sides and the included angle of 1 triangle are congruent to 2 sides and the included angle of another triangle, then the triangles are congruent by SAS.

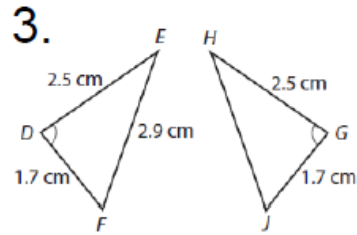
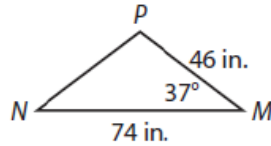


Are the triangles congruent by SAS? pg. 247-248

1. No, $\angle A \neq \angle D$

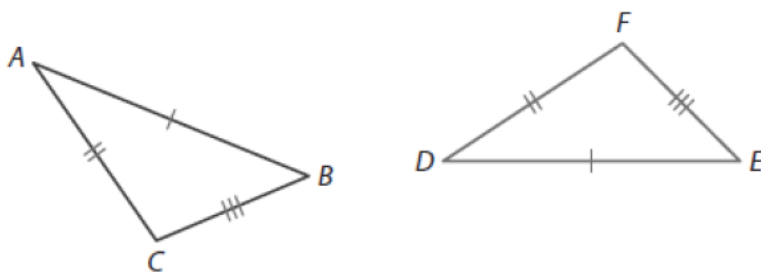


Yes by SAS

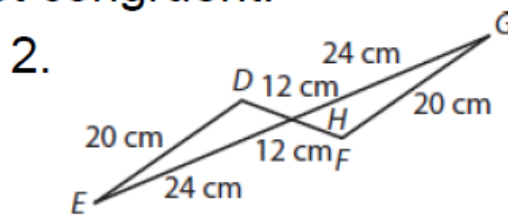
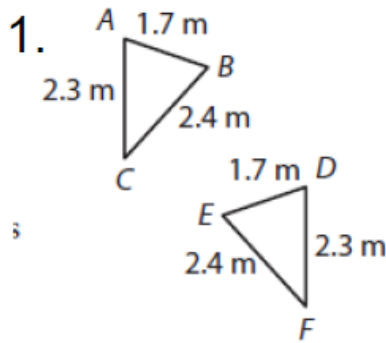


Yes, SAS

Side-Side-Side Congruence Theorem (SSS): If three sides of one triangle are congruent to three sides of another triangle, then the triangles are congruent by SSS.



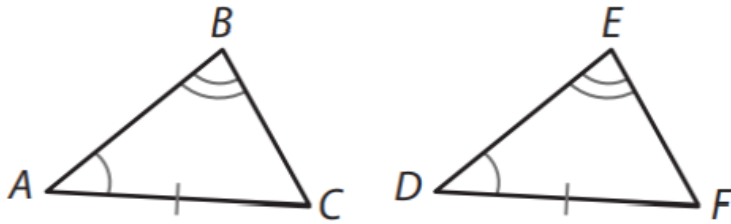
Prove that the triangles are congruent or explain why they are not congruent.



Angle-Angle-Side Congruence

Theorem: if two angles and a non-included side of one triangle are congruent to the corresponding angles and non-included side of another triangle, then the triangles are congruent by AAS.

1.



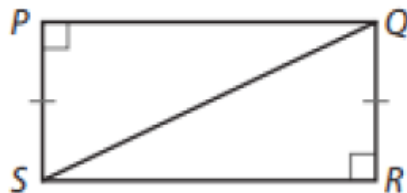
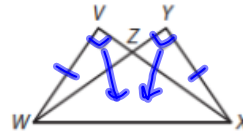
Hypotenuse-Leg (HL)

Hypotenuse-Leg (HL) Triangle Congruence Theorem

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

3. Determine whether there is enough information to prove that triangles $\triangle VWX$ and $\triangle YXW$ are congruent. Explain.

Yes by HL



Homework

pg. 237 # 3-6

pg. 250 # 2-5

pg. 263 # 10-14

pg. 290 # 1-6

pg. 298 # 2-5