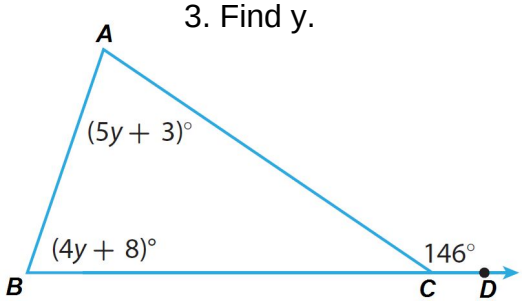
Unit 3 In Class Monday Review

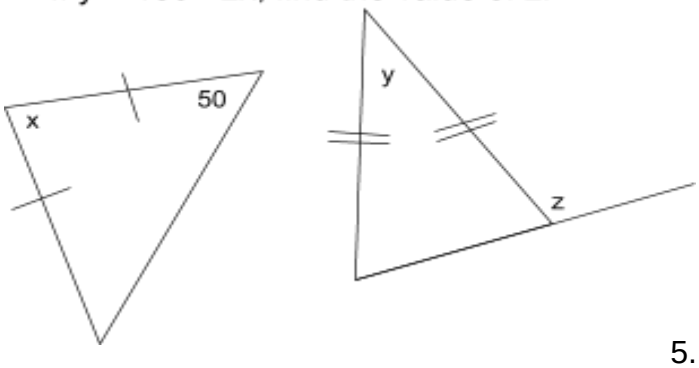
1 What are the five postulates that prove two triangles are congruent?

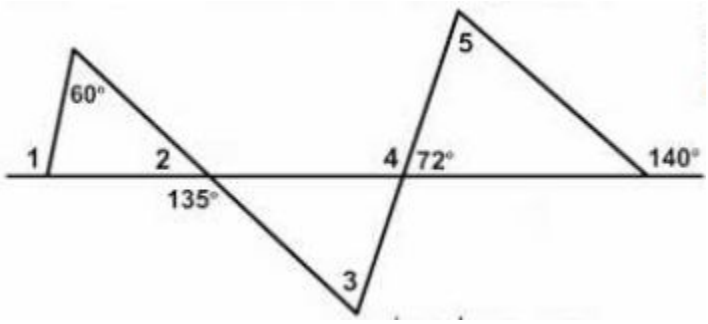
2. If two sides of a triangle are 15 cm and 23 cm, what is the range of possible lengths of the third side? Explain your answer.

3. Find y.



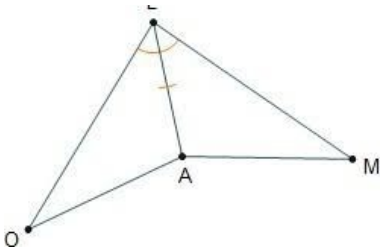
4. If y = 180 - 2x, find the value of z.



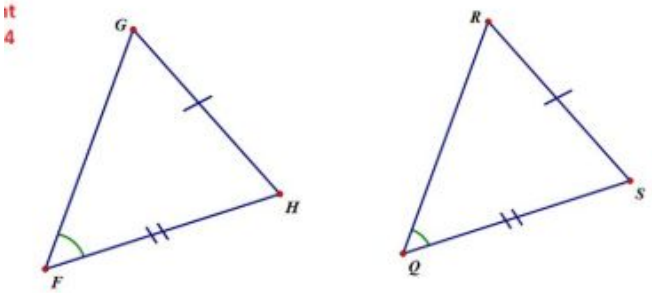


5. Find the measure of all the missing angles in the Diagram above.

6. What additional information is needed to prove that the triangles are congruent using the AAS congruence theorem?

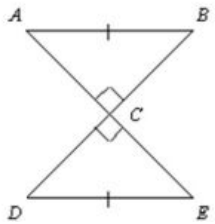


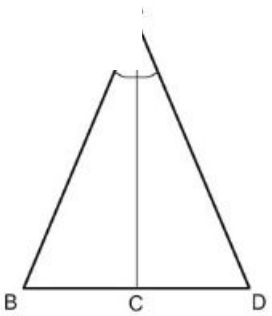
7. Example 2: Can you use SAS to prove these two triangles are congruent? If no, what information would you need in order to use SAS to prove these triangles are congruent?



8. What other information is needed in order to prove the triangles congruent using the SAS Congruence Postulate?

9. What additional information will allow you to prove the triangles congruent by the HL Theorem?



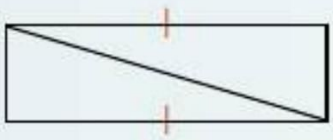


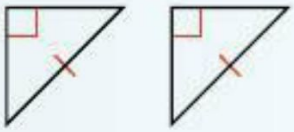
10. What additional information is needed to prove the triangles are congruent by the SAS Postulate?

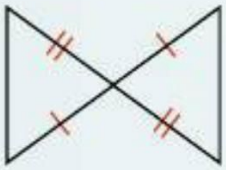
11. In $\triangle HFD$, what angle is included between $\overline{DH}$ and $\overline{DF}$?

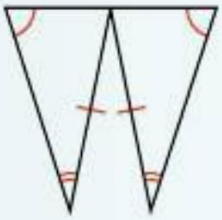
12. In $\triangle OMR$, what side is included between $\angle M$ and $\angle R$?

Which postulate or theorem, if any, could you use to prove the two triangles congruent? If there is not enough information to prove the triangles congruent, write *not enough information*.

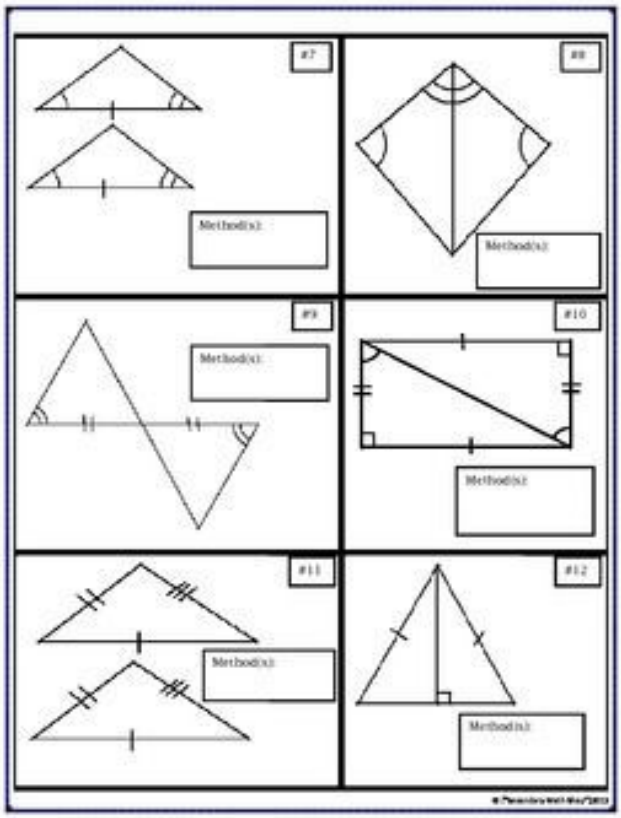
13. 

14. 

15. 

16. 

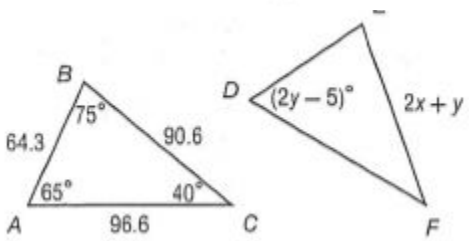
17. Name the postulate that proves the triangles congruent.

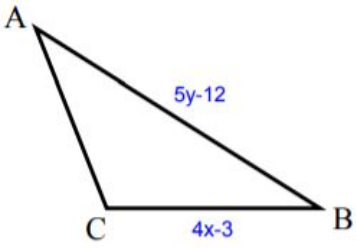


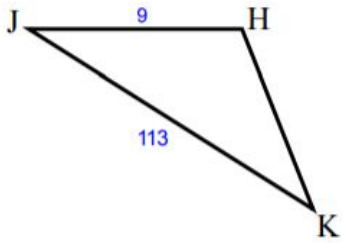
18. **Suppose $\triangle ABC \cong \triangle DEF$**

Find the value of x.

Find the value of y.





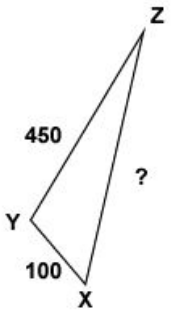


19. Find x and y if $\Delta ABC \cong \Delta KJH$

20. If $\triangle ABC \cong \triangle DEF$, $m\angle D = 4x + 1$, $m\angle B = 3x + 4$, and $m\angle F = 3x + 6$ Find x.

21. If $\triangle ABC \cong \triangle DEF$, AC = x + 3, DF = 4x - 3, $m\angle BCA = 6x + 30$ Find $m\angle EFD$.

22. Find the range of values for the third side of the triangle.



23. **Given:** $\overline{AC}$ bisects $\angle BCD$
$\overline{AC}$ bisects $\angle BAD$

Prove: $\Delta ACD \cong \Delta ACB$