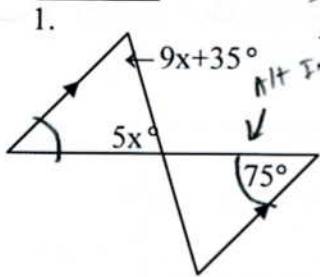


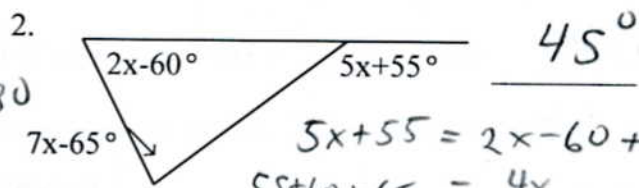
Ques. 1-4 Find the value of x.



$$9x + 35 + 5x + 75 = 180$$

$$14x + 110 = 180$$

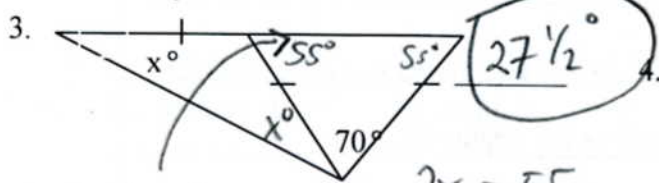
$$x = 5$$



$$5x + 55 = 2x - 60 + 7x - 65$$

$$55 + 60 + 65 = 4x$$

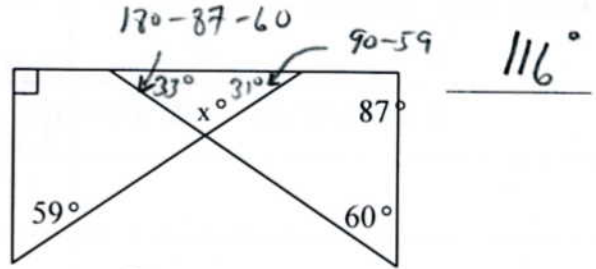
$$x = 45$$



$$\frac{180 - 70}{2} = 55$$

$$2x = 55$$

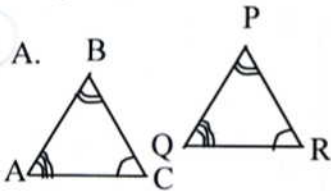
$$x = 27\frac{1}{2}$$



$$33 + 31 + x = 180$$

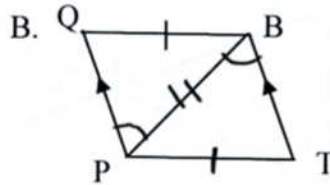
$$x = 116$$

5. If the Δ 's are \cong , finish the congruency statement for the congruent triangles in each diagram and state the name of the postulate or theorem (SSS, SAS, ASA, AAS, Rt \angle HL) you used to determine the triangles are congruent. If there is not enough information to determine the triangles are \cong , then state "not congruent".



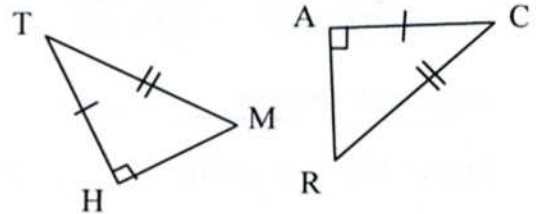
Reason: NO AAA

$\Delta ABC \cong$ Not \cong



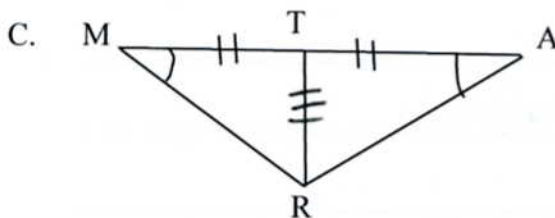
Reason: NO ASS

$\Delta BPQ \cong$ Not \cong



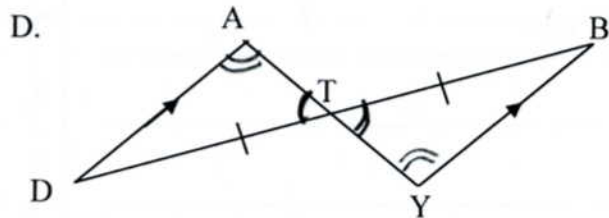
Reason: Rt HL

$\Delta HMT \cong \Delta ARC$



Reason: NO ASS

$\Delta MRT \cong$ not \cong



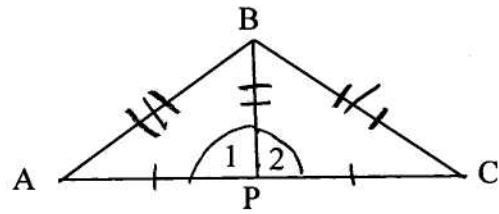
Reason: ASA or AAS

$\Delta ADT \cong \Delta YBT$

6. Given: P is the midpoint of \overline{AC} ,
 $\angle 1 \cong \angle 2$

Hint: Mark the figure.

Prove: $\overline{AB} \cong \overline{BC}$

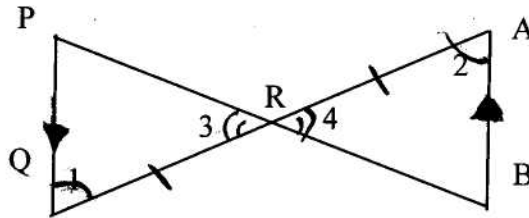


Statements	Reasons
1. P is the midpoint of \overline{AC}	1. Given
2. $\angle 1 \cong \angle 2$	2. Given
3. $\overline{AP} = \overline{CP}$	3. midpoint \rightarrow 2 \cong segments
4. $\overline{BP} \cong \overline{BP}$	4. reflexive property
5. $\triangle ABP \cong \triangle CBP$	5. SAS
6. $\overline{AB} \cong \overline{BC}$	6. CPCTC

7. Given: $\overline{PQ} \parallel \overline{AB}$, $\overline{RQ} \cong \overline{AR}$

Hint: Mark the figure.

Prove: $\triangle PQR \cong \triangle ABR$



Statements	Reasons
1. $\overline{PQ} \parallel \overline{AB}$	1. Given
2. $\overline{RQ} \cong \overline{AR}$	2. Given
3. $\angle 1 \cong \angle 2$	3. Alternate interior angles \cong
4. $\angle 3 \cong \angle 4$	4. Vertical angles \cong
5. $\triangle PQR \cong \triangle ABR$	5. ASA

8. Given points A(2,6), B(8,6), and C(5,11),

a. use the distance formula to find the length of each side $AB = 6$, $BC = \sqrt{34}$, $AC = \sqrt{34}$

$$\sqrt{(x_1 - x_2)^2 + (y_1 - y_2)^2}$$

$$AB = \sqrt{6^2 + 0^2} = \sqrt{36} = 6$$

$$AC = \sqrt{3^2 + 5^2} = \sqrt{9+25} = \sqrt{34}$$

$$BC = \sqrt{3^2 + 5^2} = \sqrt{34}$$

b.. (Circle the correct answer.) Classify $\triangle ABC$ as a

A. scalene \triangle

B. right \triangle

C. equilateral \triangle

D. isosceles \triangle

c. Graph the points. Draw the triangle.

