

1. Complete the proof.

Given: $18 = 3(3x - 6)$
 Prove: $x = 4$

Statements	Reasons
1.	1.

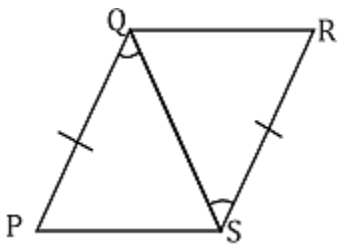
2. Complete the proof.

Given: $6a + 5a = -11$
 Prove: $x = -1$

Statements	Reasons
1.	1.

3-6: Can the two triangles be proven congruent? Circle YES or NO. If so, tell which postulate or theorem you used and finish the congruency statement.

3.

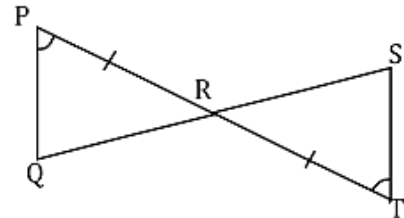


Congruent? Circle YES or NO

$\triangle PQS \cong \triangle$ _____

by _____

4.

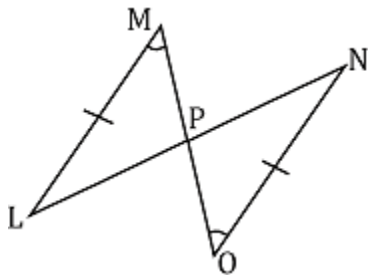


Congruent? Circle YES or NO

$\triangle QPR \cong \triangle$ _____

by _____

5.

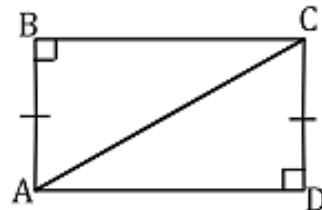


Congruent? Circle YES or NO

$\triangle MPL \cong \triangle$ _____

by _____

6.



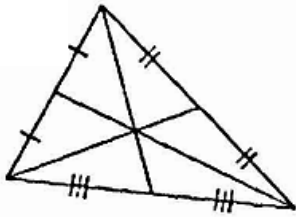
Congruent? Circle YES or NO

$\triangle ABC \cong \triangle$ _____

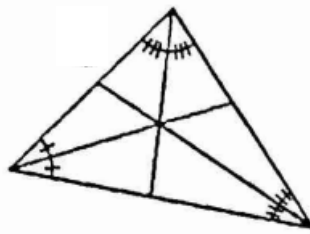
by _____

7-10: Match the picture with the corresponding point of concurrency.

_____ 7.



_____ 8.



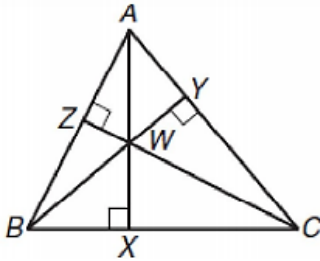
A. Centroid

B. Incenter

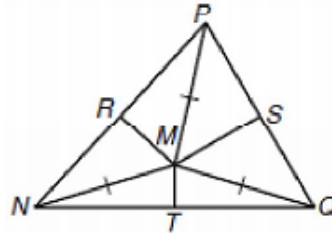
C. Circumcenter

D. Orthocenter

_____ 9.

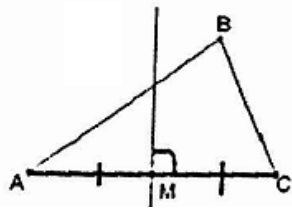


_____ 10.

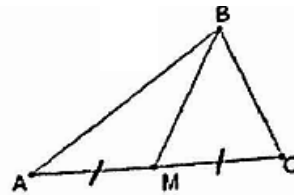


11-14: Match the picture with the corresponding segments.

_____ 11.



_____ 12.

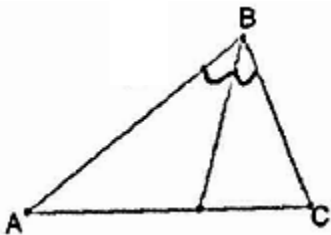


E. Median

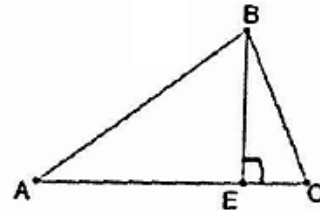
F. Angle Bisector

G. Perpendicular Bisector

_____ 13.



_____ 14.



H. Altitude

In the diagram, the perpendicular bisectors (shown with dashed segments) of $\triangle ABC$ meet at point G --the circumcenter. and are shown dashed. Find the indicated measure.

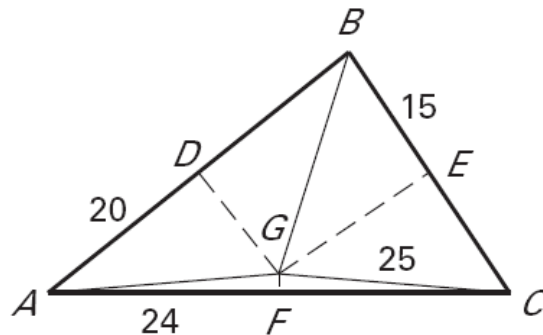
15. $AG =$ _____ 20. $BD =$ _____

16. $CF =$ _____ 21. $AB =$ _____

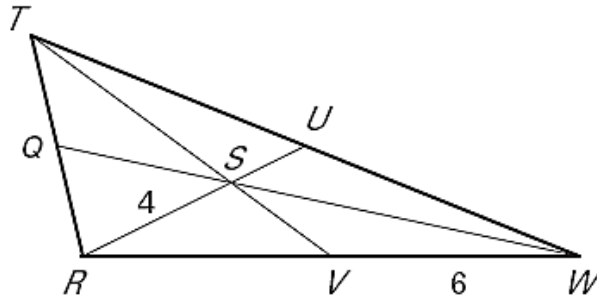
17. $CE =$ _____ 22. $AC =$ _____

18. $m\angle ADG =$ _____

19. IF $BG = (2x - 15)$, find x .

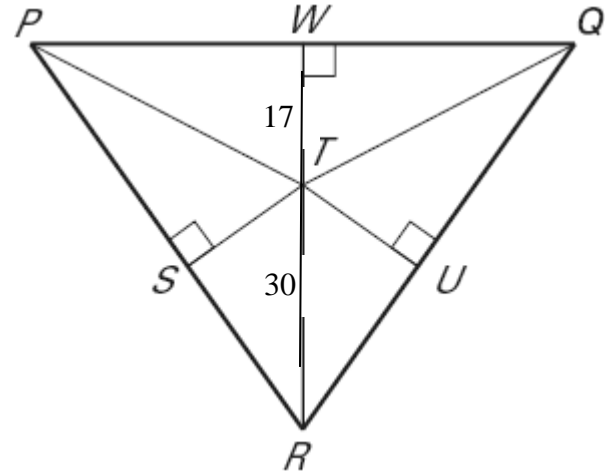


Point S is the centroid of $\triangle RTW$, $RS = 4$, $VW = 6$, and $TV = 9$. Find the length of each segment.



- 20. $RV =$ _____
- 21. $SU =$ _____
- 22. $RU =$ _____
- 23. $RW =$ _____
- 24. $TS =$ _____
- 25. $SV =$ _____

Point T is the incenter of $\triangle PQR$.



- 26. If Point T is the *incenter*, then Point T is the point of concurrency of
the _____.
- 27. $ST =$ _____
- 28. If $TU = (2x - 3)$, find x .

$x =$ _____

- 29. If $m\angle PRT = 34^\circ$, then $m\angle QRT =$ _____
- 30. If $m\angle RPQ = 52^\circ$, then $m\angle RPT =$ _____