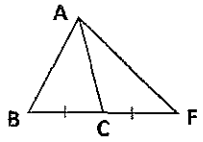
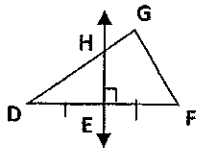
Worksheet 5-5 Altitude and Median

Name the special segment for 1-4

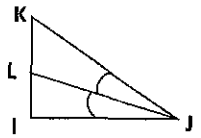
1) $\overline{AC}$



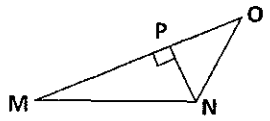
2) $\overline{HE}$



3) $\overline{JL}$

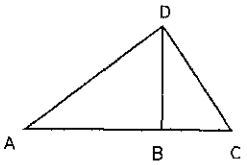


4) $\overline{PN}$

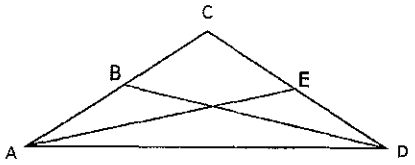


5) Draw a triangle with an altitude outside the triangle.

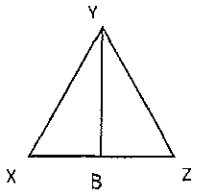
6) $\overline{DB}$ is an altitude of ΔADC, and $m\angle DBC = (n^2 + 81)°$. Find the value of n.



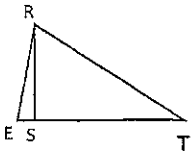
7) $\overline{DB}$ and $\overline{AE}$ are medians. If $BC = 6y + 10$, $AB = y^2 + 3y$, $CE = 6x + 12$, $ED = 2x + 60$, then find the value of x and y, and the length of the segments.



8) $\overline{YB}$ is an altitude of ΔXYZ, and $m\angle YBZ = (6x - 6)°$. Find the value of x. What is the measure of $\angle YBZ$?



9) $\overline{RS}$ is an altitude of ΔRTE, $m\angle SRT = (4x - 8)°$, and $m\angle STR = (6x + 13)°$. Find the value of x.

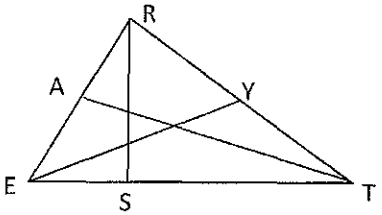


10) In ΔRTE, $AE = 3x - 11$, $AR = x + 5$, $RY = 2z - 1$, $YT = 4z - 11$, $m\angle RTA = 4y - 17$, $m\angle ATE = 3y - 4$, and $m\angle RST = 2x + 10$.

a. $\overline{RS}$ is an altitude of ΔRTE. Find the value of x.

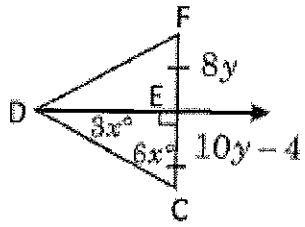
b. If $\overline{TA}$ is an angle bisector or $\angle RTE$, find $m\angle RTA$.

c. $\overline{EY}$ is a median of ΔRTE. Find RT



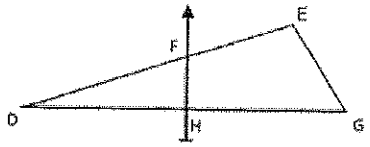
SPECIAL SEGMENTS OF TRIANGLES Name_____ Date _____

1. Find x and y.

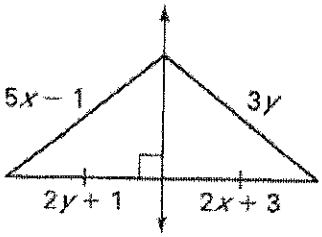


What can we now conclude about Triangle CDF?

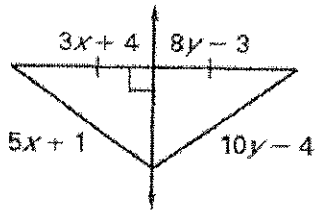
2) In ΔDEG $\overline{FH}$ is a perpendicular bisector of $\overline{DG}$ with H on $\overline{DG}$ If $DH = 2y + 3$, $GH = 7y - 42$, and $m\angle FHG = (x^2 + 9)^\circ$, then find the value of x and y. What is the measure of DG?



12)



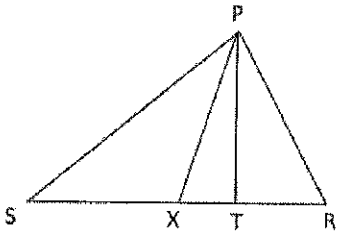
13)



In ΔPRS, $\overline{PT}$ is an altitude and $\overline{PX}$ is a median.

16) Find RS if $RX = x + 7$ and $SX = 3x - 11$.

17) Find RT if $RT = x - 6$ and $m\angle PTR = 8x - 6$



Complete the sentence with always, sometimes, or never.

18. The median of a triangle is _____ the perpendicular bisector.

19 The altitude of a triangle is _____ the perpendicular bisector.

20. The medians of a triangle _____ intersect inside the triangle.

21 The altitudes of a triangle _____ intersect inside the triangle.