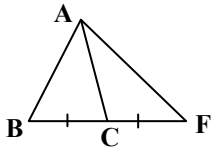


Worksheet Altitude, Median, Angle bisector, perpendicular Bisector

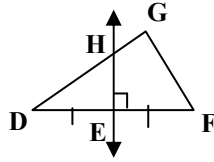
Name _____

Name the special segment for 1-4

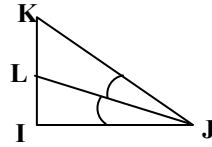
1) \overline{AC}



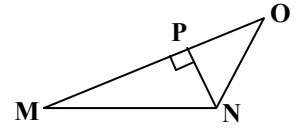
2) \overline{HE}



3) \overline{JL}

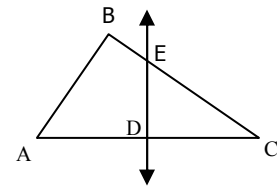


4) \overline{PN}

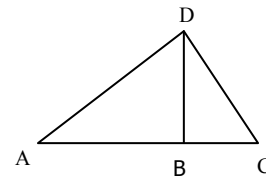


5) Draw a triangle with an altitude outside the triangle.

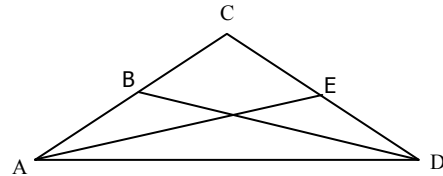
6) In $\triangle ABC$, \overline{DE} is perpendicular bisector of \overline{AC} with D on \overline{AC} . If $AD = 2y + 4$, $CD = y + 12$, and $m\angle EDC = 5(x - 12)^\circ$. Find the value of x and y. Find length of AD, DC , and AC .



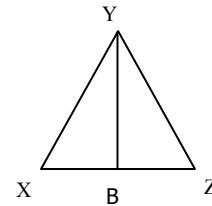
7) \overline{DB} is an altitude of $\triangle ADC$, and $m\angle DBC = (n^2 + 81)^\circ$. Find the value of n.



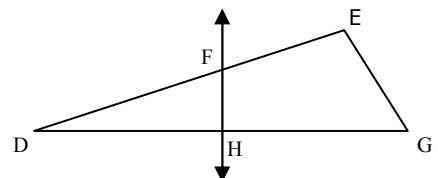
8) \overline{DB} and \overline{AE} are medians. If $BC = 6y + 10$, $AB = y^2 + 3y$, $CE = 6x + 12$, $ED = 2x + 60$, then find the value of x and y, and the length of the segments.



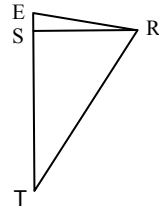
9) \overline{YB} is an altitude of $\triangle XYZ$, and $m\angle YBZ = (6x - 6)^\circ$. Find the value of x. What is the measure of $\angle YBZ$?



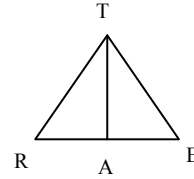
10) In $\triangle DEG$, \overline{FH} is a perpendicular bisector of \overline{DG} with H on \overline{DG} . If $DH = 2y + 3$, $GH = 7y - 42$, and $m\angle FHG = (x^2 + 9)^\circ$, then find the value of x and y. What is the measure of DG ?



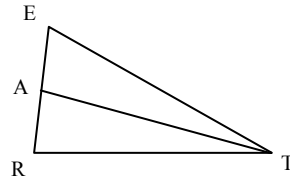
- 11) \overline{RS} is an altitude of $\triangle RTE$, $m\angle SRT = (4x - 8)^\circ$, and $m\angle STR = (6x + 13)^\circ$. Find the value of x .



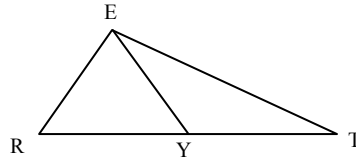
- 12) In $\triangle RTE$, \overline{TA} bisects $\angle RTE$, $m\angle RTA = (3y - 4)^\circ$, and $m\angle ETA = (4y - 17)^\circ$. Find the measure of $\angle RTE$.



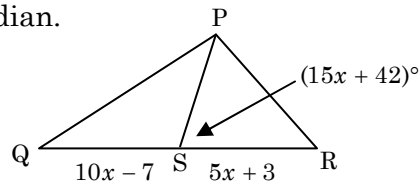
- 13) \overline{TA} is a median of $\triangle RTE$, $AE = 3x - 11$, and $AR = x + 5$. Find AE , AR , and ER .



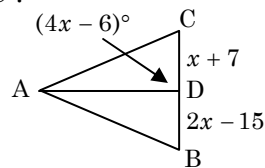
- 14) \overline{EY} is a median of $\triangle RET$, $RY = 2z - 1$, and $TY = 4z - 11$. Find \overline{RT} .



- 15) Find x and the measure of $\angle PSR$, if \overline{PS} is a median.



- 16) Find x , CD , and DB , if \overline{AD} is an altitude of $\triangle ABC$.



- 17) $\triangle WHA$, if \overline{WP} is a median and an angle bisector, $AP = 3y + 11$, $PH = 7y - 5$, $m\angle HWP = x + 12$, $m\angle PAW = 3x - 2$, and $m\angle HWA = 4x - 16$, find x and y . Is \overline{WP} also an altitude, explain?

