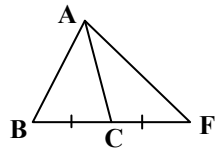
Worksheet Altitude, Median,
Angle bisector, perpendicular Bisector

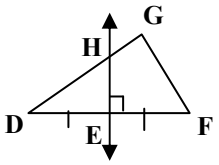
Name _____

Name the special segment for 1-4

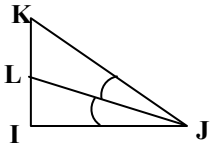
1) $\overline{AC}$



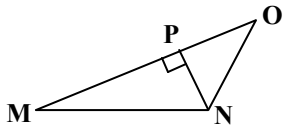
2) $\overleftrightarrow{HE}$



3) $\overline{JL}$

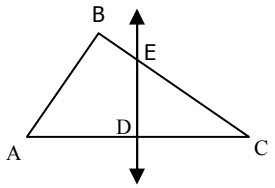


4) $\overline{PN}$

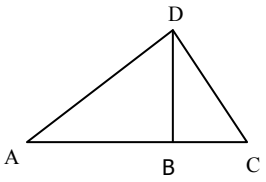


5) Draw a triangle with an altitude outside the triangle.

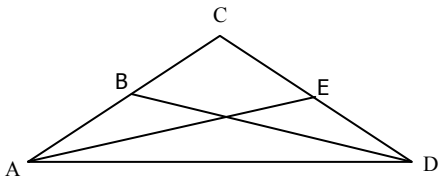
6) In ΔABC, $\overleftrightarrow{DE}$ is perpendicular bisector of $\overline{AC}$ with D on $\overline{AC}$. If $AD = 2y + 4$, $CD = y + 12$, and $m\angle EDC = 5(x - 12)°$. Find the value of x and y. Find length of $AD, DC,$ and, AC.



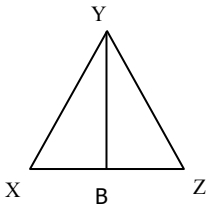
7) $\overline{DB}$ is an altitude of ΔADC, and $m\angle DBC = (n^2 + 81)°$. Find the value of n.



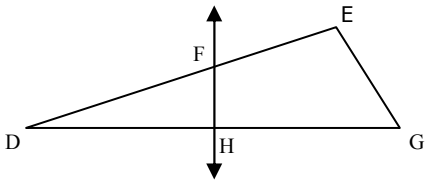
8) $\overline{DB}$ and $\overline{AE}$ are medians. If $BC = 6y + 10$, $AB = y^2 + 3y$, $CE = 6x + 12$, $ED = 2x + 60$, then find the value of x and y, and the length of the segments.



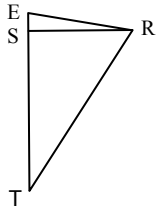
9) $\overline{YB}$ is an altitude of ΔXYZ, and $m\angle YBZ = (6x - 6)°$. Find the value of x. What is the measure of $\angle YBZ$?



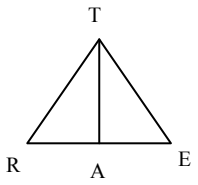
10) In ΔDEG $\overleftrightarrow{FH}$ is a perpendicular bisector of $\overline{DG}$ with H on $\overline{DG}$. If $DH = 2y + 3$, $GH = 7y - 42$, and $m\angle FHG = (x^2 + 9)°$, then find the value of x and y. What is the measure of DG?



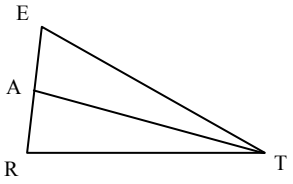
11) $\overline{\boldsymbol{RS}}$ is an altitude of $\Delta\boldsymbol{RTE}$, $m\angle SRT = (4x - 8)°$, and $m\angle STR = (6x + 13)°$. Find the value of x.



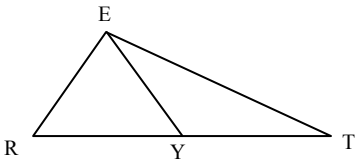
12) In ΔRTE, $\overline{\boldsymbol{TA}}$ bisects $\angle\boldsymbol{RTE}$, $m\angle RTA = (3y - 4)°$, and $m\angle ETA = (4y - 17)°$. Find the measure of $\angle\boldsymbol{RTE}$.



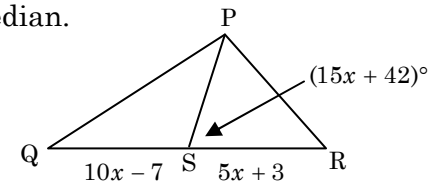
13) $\overline{\boldsymbol{TA}}$ is a median of $\Delta\boldsymbol{RTE}$, $AE = 3x - 11$, and $AR = x + 5$. Find $\boldsymbol{AE}$, $\boldsymbol{AR}$, **and,** $\boldsymbol{ER}$.



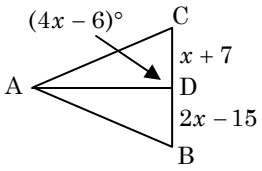
14) $\overline{\boldsymbol{EY}}$ is a median of $\Delta\boldsymbol{RET}$, $RY = 2z - 1$, and $TY = 4z - 11$. Find $\overline{\boldsymbol{RT}}$.



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 ΔABC.



17) ΔWHA, 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?