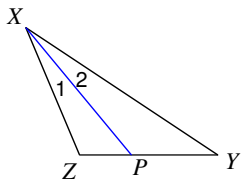
0520 Geometry Name_____

Angle bisectors and medians

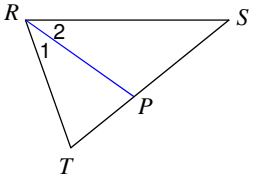
Date_____ Period____

Each figure shows a triangle with one of its angle bisectors.

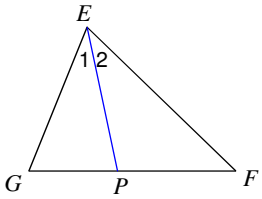
1) $m\angle 2 = 17°$. Find $m\angle 1$.



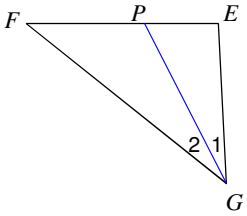
2) Find $m\angle TRS$ if $m\angle 2 = 35°$.



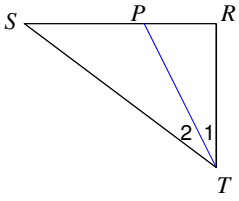
3) $m\angle GEF = 68°$. Find $m\angle 1$.



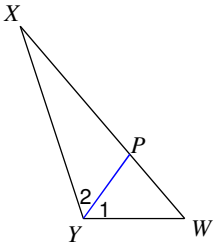
4) Find $m\angle EGF$ if $m\angle 2 = 24°$.



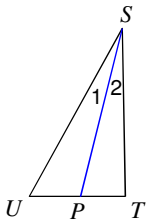
5) $m\angle RTS = 52°$. Find $m\angle 2$.



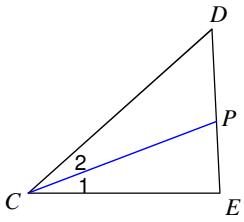
6) Find $m\angle WYX$ if $m\angle 2 = 54°$.



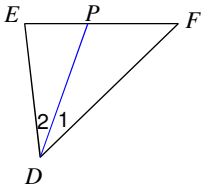
7) $m\angle 2 = 15°$. Find $m\angle UST$.



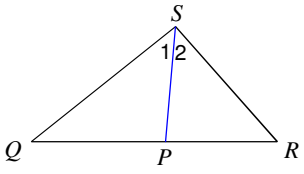
8) $m\angle 1 = 21°$. Find $m\angle ECD$.



9) $m\angle 2 = 26°$. Find $m\angle 1$.

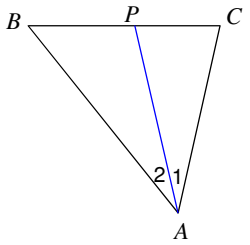


10) Find $m\angle QSR$ if $m\angle 1 = 46°$.

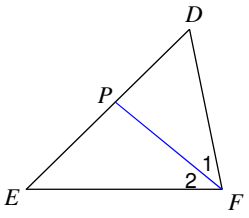


Each figure shows a triangle with one of its angle bisectors, write and solve an equation for the variable x.

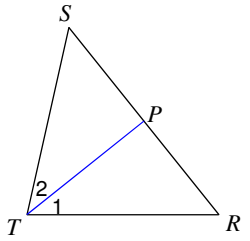
11) Find x if $m\angle 2 = 4x - 3$ and $m\angle CAB = 6x + 8$.



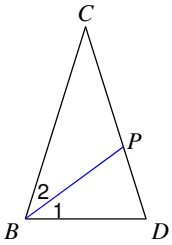
12) Find x if $m\angle 1 = 20x - 1$ and $m\angle 2 = 18x + 3$.



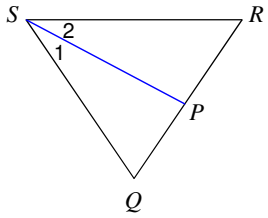
13) Find x if $m\angle 2 = 6 + 8x$ and $m\angle 1 = 10x - 2$.



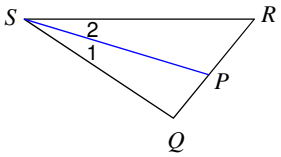
14) $m\angle 2 = 3x + 12$ and $m\angle DBC = 8x + 8$. Find x.



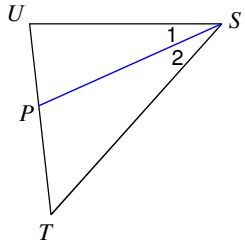
15) Find x if $m\angle 1 = 13x + 2$ and $m\angle 2 = 14x$.



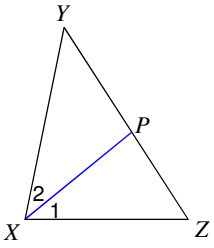
16) Find x if $m\angle 2 = 4x + 1$ and $m\angle 1 = 3x + 5$.



17) Find x if $m\angle 1 = 3x - 6$ and $m\angle UST = 3x + 18$.

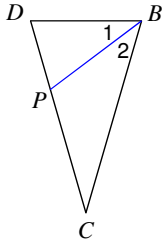


18) $m\angle 2 = 39x$ and $m\angle ZXY = 77x + 1$. Find x.

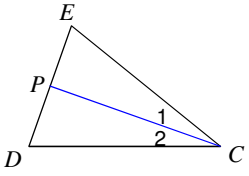


Each figure shows a triangle with one of its angle bisectors, write and solve an equation for x then subsitute the value of x to find the measure of the given angle.

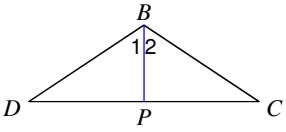
19) $m\angle 2 = 5x + 2$ and $m\angle 1 = 6x - 5$. Find $m\angle 2$.



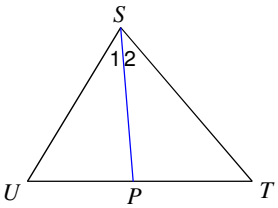
20) $m\angle 2 = 3x + 7$ and $m\angle 1 = 5x - 1$. Find $m\angle ECD$.



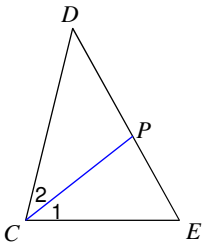
21) $m\angle 1 = 5x + 6$ and $m\angle DBC = 11x + 2$. Find $m\angle DBC$.



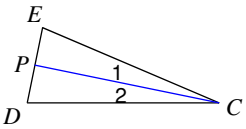
22) Find $m\angle 2$ if $m\angle 2 = 7x - 6$ and $m\angle 1 = 6x$.



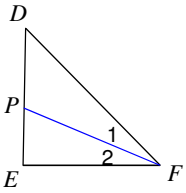
23) Find $m\angle ECD$ if $m\angle 1 = 39x - 1$ and $m\angle ECD = 75x + 1$.



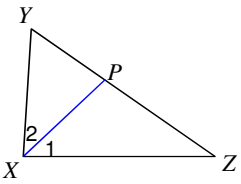
24) Find $m\angle 2$ if $m\angle 2 = 2x - 3$ and $m\angle ECD = 2x + 8$.



25) $m\angle 1 = 3x - 4$ and $m\angle 2 = 2x + 5$. Find $m\angle 1$.

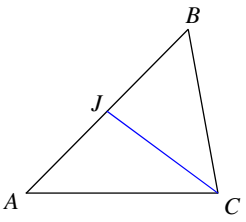


26) Find $m\angle 1$ if $m\angle 1 = 3 + 20x$ and $m\angle 2 = 22x - 1$.

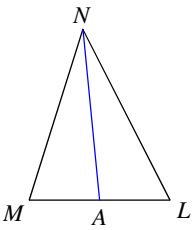


Each figure shows a triangle with one or more of its medians.

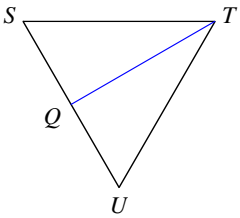
27) Find JB if $JA = 2.95$



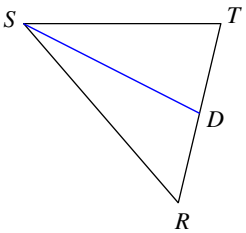
28) Find ML if $AL = 4$



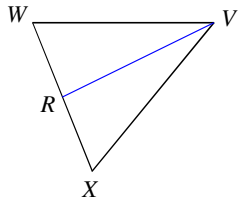
29) Find QU if $SU = 9$



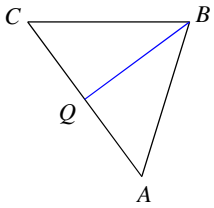
30) Find RT if $DT = 10$



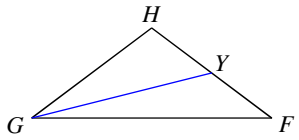
31) Find WX if $RX = 4.5$



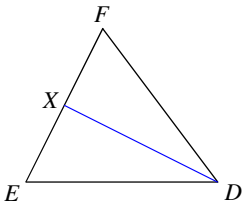
32) Find QA if $CA = 6$



33) Find YF if $YH = 2$

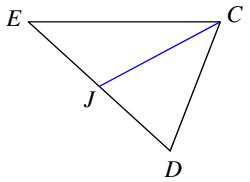


34) Find FE if $XE = 12$

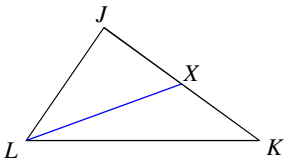


Each figure shows a triangle with one or more of its medians. Write and solve an equation for x.

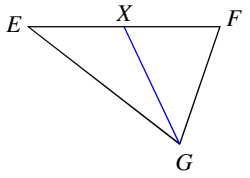
35) Find x if $ED = 3x - 1$ and $JD = x + 3$



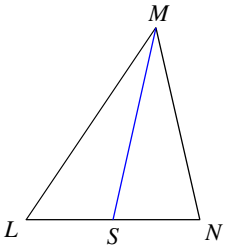
36) Find x if $KJ = 5x$ and $XJ = x + 3$



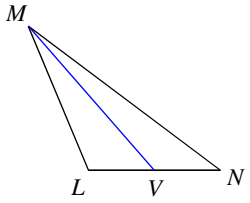
37) Find x if $XE = 2x - 3$ and $XF = x + 1$



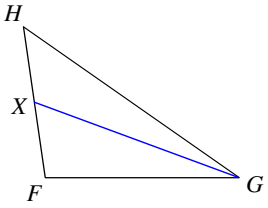
38) Find x if $SN = 2x - 6$ and $SL = x + 2$



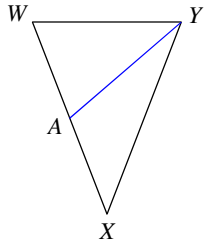
39) Find x if $LN = 3x - 4$ and $VN = x + 2$



40) Find x if $XF = 3x - 1$ and $XH = x + 3$



41) Find x if $AX = x - 2$ and $AW = 2x - 11$



42) Find x if $VA = 2 + x$ and $VC = 2x - 2$