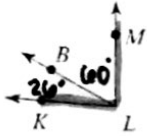


The Angle Addition Postulate

- 1) Find $m\angle KLM$ if $m\angle KLB = 26^\circ$
and $m\angle BLM = 60^\circ$.



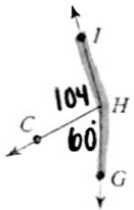
$$m\angle KLM = 26^\circ + 60^\circ = \boxed{86^\circ}$$

- 2) Find $m\angle FGH$ if $m\angle FGB = 105^\circ$
and $m\angle BGH = 54^\circ$.



$$m\angle FGH = 159^\circ$$

- 3) $m\angle GHC = 60^\circ$ and $m\angle CHI = 104^\circ$.
Find $m\angle GHI$.



$$m\angle GHI = 104 + 60 = \boxed{164^\circ}$$

- 4) Find $m\angle WVU$ if $m\angle ZVU = 62^\circ$
and $m\angle WVZ = 50^\circ$.



$$m\angle WVU = 50 + 62 = \boxed{112^\circ}$$

- 5) $m\angle FMN = 99^\circ$ and $m\angle LMF = 36^\circ$.
Find $m\angle LMN$.



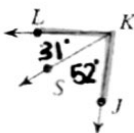
$$m\angle LMN = 99^\circ + 36^\circ = \boxed{135^\circ}$$

- 6) Find $m\angle WDC$ if $m\angle EDC = 145^\circ$
and $m\angle EDW = 61^\circ$.



$$m\angle WDC = 145 - 61 = \boxed{84^\circ}$$

- 7) Find $m\angle JKL$ if $m\angle SKL = 31^\circ$
and $m\angle JKS = 52^\circ$.



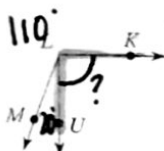
$$m\angle JKL = 31^\circ + 52^\circ = \boxed{83^\circ}$$

- 8) Find $m\angle IHQ$ if $m\angle IHG = 176^\circ$
and $m\angle QHG = 130^\circ$.



$$m\angle IHQ = 176 - 130 = \boxed{46^\circ}$$

- 9) Find $m\angle KLU$ if $m\angle ULM = 20^\circ$
and $m\angle KLM = 110^\circ$.



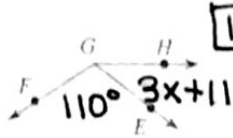
$$m\angle KLU = 110 - 20 = \boxed{90^\circ}$$

- 10) Find $m\angle IJA$ if $m\angle AJK = 61^\circ$
and $m\angle IJK = 153^\circ$.



$$m\angle IJA = 153 - 61 = \boxed{92^\circ}$$

- 11) $m\angle HGF = 16x + 4$, $m\angle EGF = 110^\circ$,
and $m\angle HGE = 3x + 11$. Find x .



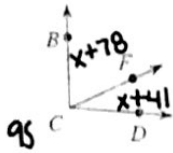
$$16x + 4$$

$$\begin{aligned} 121 &= 13x + 4 \\ -4 & \quad -4 \\ \hline 117 &= 13x \end{aligned}$$

$$x = 9$$

$$\begin{aligned} 110 + 3x + 11 &= 16x + 4 \\ -3x + 121 &= 16x + 4 \\ -3x & \quad -3x \end{aligned}$$

- 13) $m\angle FCD = x + 41$, $m\angle BCF = x + 78$,
and $m\angle BCD = 95^\circ$. Find x .



$$2x + 119 = 95$$

$$2x = -24$$

$$x = -12$$

- 15) $m\angle GFZ = 38^\circ$, $m\angle ZFE = 2x + 125$,
and $m\angle GFE = x + 163$. Find x .



$$2x + 163 = x + 163$$

$$x = 0$$

- 17) Find $m\angle HIW$ if $m\angle WIJ = 10x$,
 $m\angle HIJ = 145^\circ$, and $m\angle HIW = 2x + 13$.



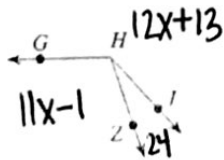
$$12x + 13 = 145$$

$$12x = 132$$

$$x = 11$$

$$m\angle HIW = 2(11) + 13 = 35^\circ$$

- 19) $m\angle ZHG = 11x - 1$, $m\angle IHZ = 24^\circ$,
and $m\angle IHG = 12x + 13$. Find $m\angle IHG$.



$$11x - 1 + 24 = 12x + 13$$

$$11x + 23 = 12x + 13$$

$$x = 10$$

$$12(10) + 13 = 133^\circ$$

- 12) $m\angle VUT = 175^\circ$, $m\angle VUJ = 17x - 3$,
and $m\angle JUT = 17x + 8$. Find x .



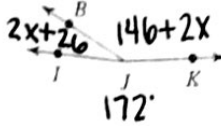
$$17x - 3 + 17x + 8 = 175$$

$$34x + 5 = 175$$

$$34x = 170$$

$$x = 5$$

- 14) Find x if $m\angle BJK = 146 + 2x$,
 $m\angle IJK = 172^\circ$, and $m\angle IJB = 2x + 26$.



$$4x + 172 = 172$$

$$4x = 0$$

$$x = 0$$

- 16) Find x if $m\angle LMN = 135^\circ$,
 $m\angle LMV = -1 + 45x$, and $m\angle VMN = 23x$.



$$68x - 1 = 135$$

$$68x = 136$$

$$x = 2$$

- 18) $m\angle ABC = 17x + 8$, $m\angle ABK = 42^\circ$,
and $m\angle KBC = 12x - 4$. Find $m\angle ABC$.



$$12x - 4 + 42 = 17x + 8$$

$$12x + 38 = 17x + 8$$

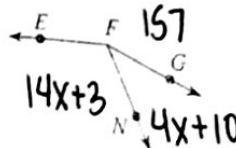
$$30 = 5x$$

$$x = 6$$

$$m\angle ABC = 17(6) + 8$$

$$= 110^\circ$$

- 20) $m\angle GFN = 4x + 10$, $m\angle NFE = 14x + 3$,
and $m\angle GFE = 157^\circ$. Find $m\angle NFE$.



$$18x + 13 = 157$$

$$x = 8$$

$$m\angle NFE = 14(8) + 3$$

$$= 115^\circ$$