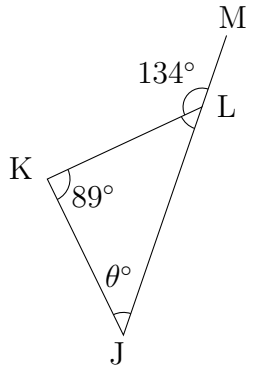
Name: _____ **Date:** _____

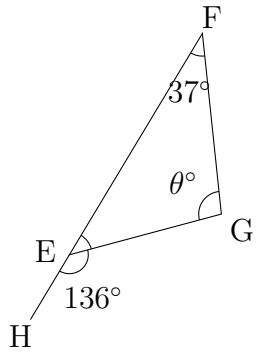
Angles in a Triangle: Answers

(1)



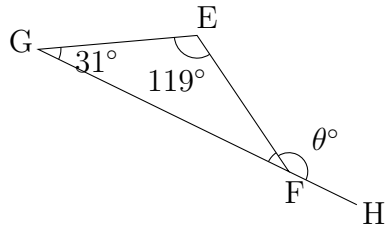
$$\begin{aligned}\angle J &= \angle MLK - \angle K \\ &= 134^\circ - 89^\circ \\ &= 45^\circ\end{aligned}$$

(2)



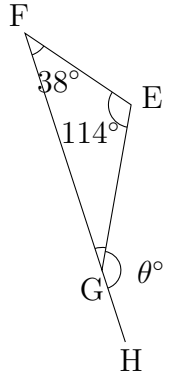
$$\begin{aligned}\angle G &= \angle HEG - \angle F \\ &= 136^\circ - 37^\circ \\ &= 99^\circ\end{aligned}$$

(3)



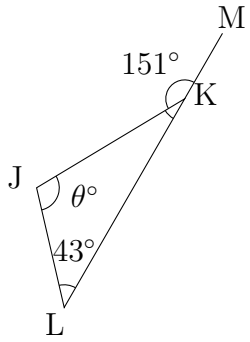
$$\begin{aligned}\angle HFE &= \angle G + \angle E \\ &= 31^\circ + 119^\circ \\ &= 150^\circ\end{aligned}$$

(4)



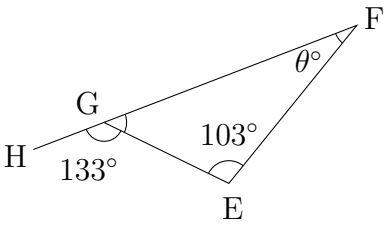
$$\begin{aligned}\angle HGE &= \angle F + \angle E \\ &= 38^\circ + 114^\circ \\ &= 152^\circ\end{aligned}$$

(5)



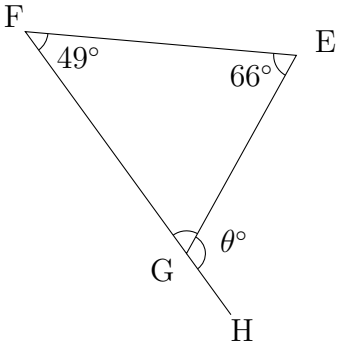
$$\begin{aligned}\angle \mathrm{J} &= \angle \mathrm{MKJ} - \angle \mathrm{L} \\ &= 151^\circ - 43^\circ \\ &= 108^\circ\end{aligned}$$

(6)



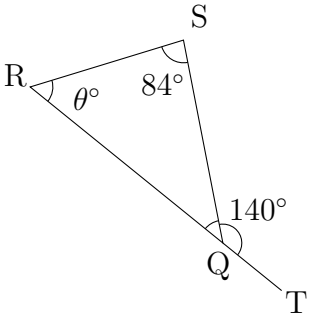
$$\begin{aligned}\angle \mathrm{F} &= \angle \mathrm{HGE} - \angle \mathrm{E} \\ &= 133^\circ - 103^\circ \\ &= 30^\circ\end{aligned}$$

(7)



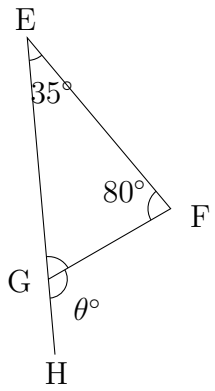
$$\begin{aligned}\angle \mathrm{HGE} &= \angle \mathrm{F} + \angle \mathrm{E} \\ &= 49^\circ + 66^\circ \\ &= 115^\circ\end{aligned}$$

(8)



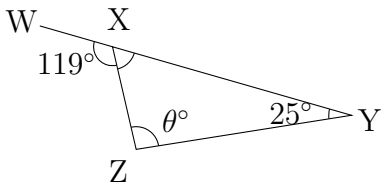
$$\begin{aligned}\angle \mathrm{R} &= \angle \mathrm{TQS} - \angle \mathrm{S} \\ &= 140^\circ - 84^\circ \\ &= 56^\circ\end{aligned}$$

(9)



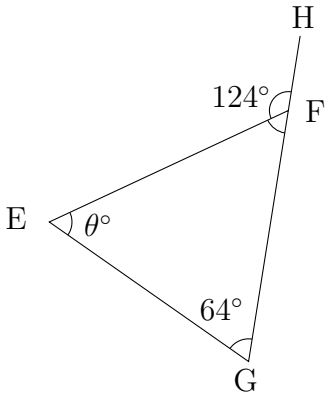
$$\begin{aligned}\angle\text{HGF} &= \angle\text{E} + \angle\text{F} \\ &= 35^\circ + 80^\circ \\ &= 115^\circ\end{aligned}$$

(10)



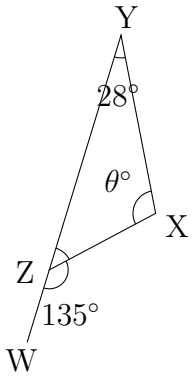
$$\begin{aligned}\angle\text{Z} &= \angle\text{WXZ} - \angle\text{Y} \\ &= 119^\circ - 25^\circ \\ &= 94^\circ\end{aligned}$$

(11)



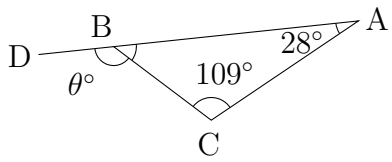
$$\begin{aligned}\angle\text{E} &= \angle\text{HFE} - \angle\text{G} \\ &= 124^\circ - 64^\circ \\ &= 60^\circ\end{aligned}$$

(12)



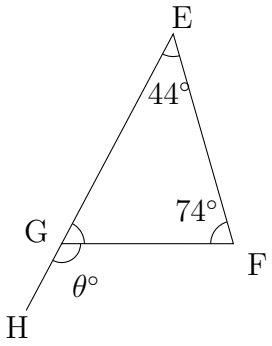
$$\begin{aligned}\angle\text{X} &= \angle\text{WZX} - \angle\text{Y} \\ &= 135^\circ - 28^\circ \\ &= 107^\circ\end{aligned}$$

(13)



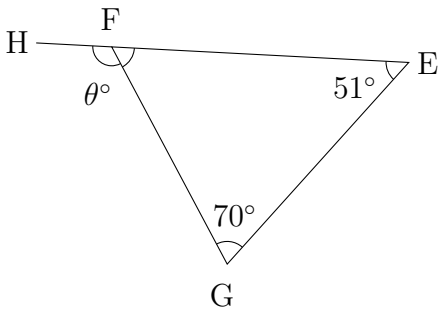
$$\begin{aligned}\angle\text{DBC} &= \angle\text{A} + \angle\text{C} \\ &= 28^\circ + 109^\circ \\ &= 137^\circ\end{aligned}$$

(14)



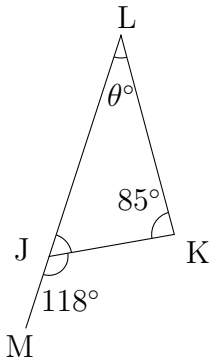
$$\begin{aligned}\angle\text{HGF} &= \angle\text{E} + \angle\text{F} \\ &= 44^\circ + 74^\circ \\ &= 118^\circ\end{aligned}$$

(15)



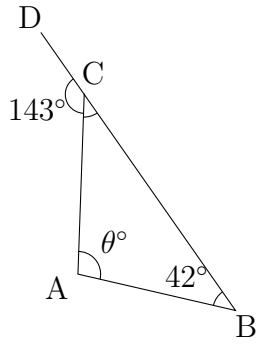
$$\begin{aligned}\angle\text{HFG} &= \angle\text{E} + \angle\text{G} \\ &= 51^\circ + 70^\circ \\ &= 121^\circ\end{aligned}$$

(16)



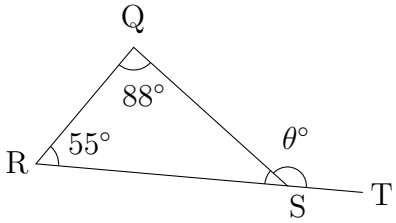
$$\begin{aligned}\angle\text{L} &= \angle\text{MJK} - \angle\text{K} \\ &= 118^\circ - 85^\circ \\ &= 33^\circ\end{aligned}$$

(17)



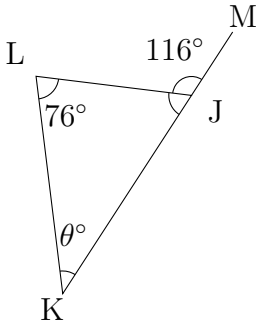
$$\begin{aligned}\angle A &= \angle DCA - \angle B \\ &= 143^\circ - 42^\circ \\ &= 101^\circ\end{aligned}$$

(18)



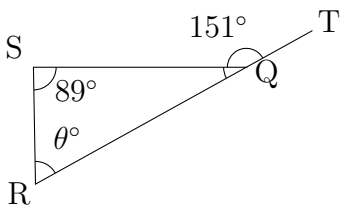
$$\begin{aligned}\angle TSQ &= \angle R + \angle Q \\ &= 55^\circ + 88^\circ \\ &= 143^\circ\end{aligned}$$

(19)



$$\begin{aligned}\angle K &= \angle MJL - \angle L \\ &= 116^\circ - 76^\circ \\ &= 40^\circ\end{aligned}$$

(20)



$$\begin{aligned}\angle R &= \angle TQS - \angle S \\ &= 151^\circ - 89^\circ \\ &= 62^\circ\end{aligned}$$