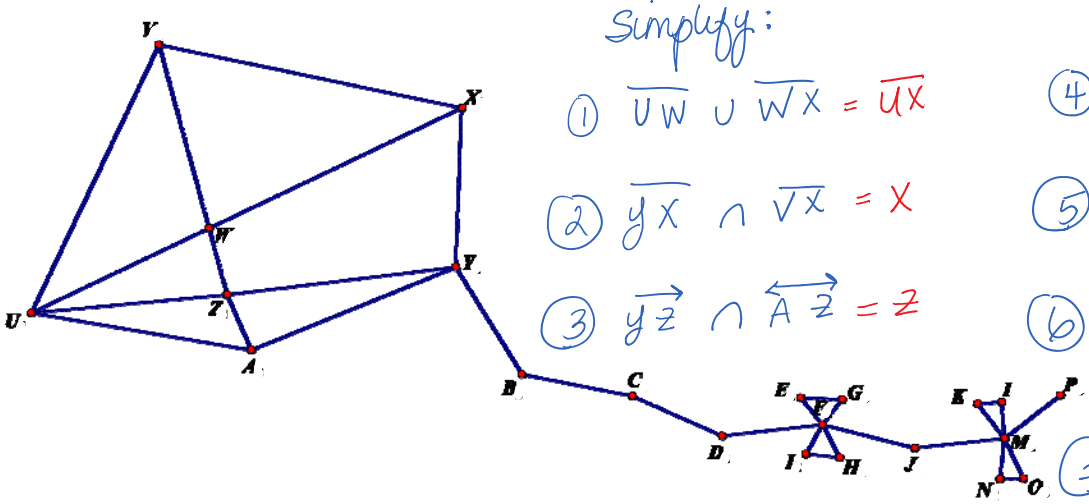


Simplify:

① $\overline{UW} \cup \overline{WX} = \overline{UX}$

② $\overline{YX} \cap \overline{VX} = X$

③ $\overrightarrow{YZ} \cap \overleftrightarrow{AZ} = Z$

④ $\overline{EG} \cap \overline{GF} \cap \overline{EF} = \emptyset$

⑤ $\overrightarrow{XV} \cup \overrightarrow{XW} = \angle VXW$

⑥ $\overrightarrow{UW} \cup \overrightarrow{XW} = \overleftrightarrow{UX}$

⑦ $\overline{VW} \cap \overline{VZ} = \overline{VW}$

⑧ $\overline{VX} \cup \overrightarrow{XY} = \angle VXY$

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Finding precise angle measures

convert to degrees, minutes and seconds:

① $111.4^\circ$

$0.4^\circ \times \frac{60'}{1^\circ} = \frac{4}{10} \cdot 60' = 24'$

$111^\circ 24'$

② $13\frac{4}{15}^\circ$

$\frac{4}{15}^\circ \times \frac{60'}{1^\circ} = 16'$

$13^\circ 16'$

③ $72\frac{61}{120}^\circ$

$\frac{61}{120}^\circ \times \frac{60'}{1^\circ} = 30.5'$

$0.5' \times 60'' = 30''$

$72^\circ 30' 30''$

$72°30'30''$ $\quad 0.5' \times \frac{60''}{1} = 30''$

(4) $18\frac{5}{16}°$ $\quad \frac{5}{16}° \times \frac{60'}{1°} = 18.75'$ $\quad \frac{3}{4}' \times \frac{60''}{1'} = 45''$

$18°18'45''$

Convert to degrees:

(5) $173°3'$ $\quad 3' \times \frac{1°}{60'} = \frac{1}{20}°$

$173\frac{1}{20}°$

(6) $25°4'20''$ $\quad 20'' \times \frac{1'}{60''} = \frac{1}{3}'$ $\quad \frac{13}{3}' \times \frac{1°}{60'} = \frac{13}{180}°$

$25\frac{13}{180}°$ $\quad 4\frac{1}{3}' = \frac{13}{3}'$

(7) $37°16'36''$ $\quad 36'' \times \frac{1'}{60''} = \frac{3}{5}'$ $\quad \frac{83}{5}' \times \frac{1°}{60'} = \frac{83}{300}°$

$37\frac{83}{300}°$ $\quad 16\frac{3}{5}' = \frac{83}{5}'$

(8) $100°24'45''$ $\quad 45'' \times \frac{1'}{60''} = \frac{3}{4}'$ $\quad \frac{99}{4}' \times \frac{1°}{60'} = \frac{33}{80}°$

$100\frac{33}{80}°$ $\quad 24\frac{3}{4}' = \frac{99}{4}'$

(9) Simplify:

(10) Simplify:

$$\begin{array}{r} 13^\circ\ 47'\ 29'' \\ +\ 24^\circ\ 18'\ 57'' \\ \hline 37^\circ\ 65'\ 86'' \\ 37^\circ\ 66'\ 26'' \\ 38^\circ\ 6'\ 26'' \end{array}$$

(10) $\sin^{-1}(0.75)$

$$\begin{array}{r} 89^\circ\ 60'\ 60'' \\ -\ 41^\circ\ 13'\ 45'' \\ \hline 48^\circ\ 46'\ 15'' \end{array}$$