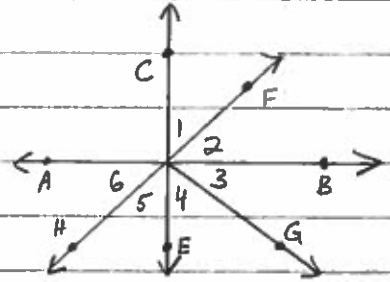


A#19 Part I: p. 63-64 WE #1-14, 17, 22

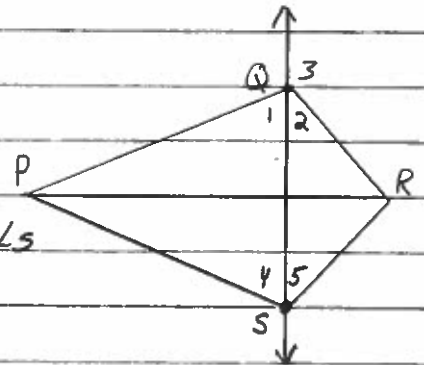
For Ex #1-14



1. $AD + DB = AB$ [Seg. Add. Post.]
2. $m\angle 1 + m\angle 2 = m\angle CDB$ [∠ Add. Post.]
3. $\angle 2 \cong \angle 6$ [Vert. ∠s Thm]
4. If D is the midpoint of \overline{AB} , then $AD = \frac{1}{2}AB$.
[Midpt. Thm]
5. If \overrightarrow{DE} bisects $\angle CDB$, then $\angle 1 \cong \angle 2$. [Def. of ∠ bisector]
6. $m\angle ADF + m\angle FDB = 180^\circ$ [∠ Add. Post.]
7. If $\overline{CD} \perp \overline{AB}$, then $m\angle CDB = 90^\circ$ [Def. of \perp]
8. If $\angle 4 \cong \angle 3$, then \overrightarrow{DG} bisects $\angle BDE$. [Def. of ∠ bisector]
9. If $m\angle 3 + m\angle 4 = 90^\circ$, then $\angle 3$ and $\angle 4$ are complements. [Def. of Comp. ∠s]
10. If $\angle ADF$ and $\angle 4$ are supplements, then $m\angle ADF + m\angle 4 = 180^\circ$. [Def. of Supp. ∠s]
11. If $\overline{AB} \perp \overline{CE}$, then $\angle ADC \cong \angle ADE$. [\perp lines \rightarrow \cong adj. ∠s]
12. If $\angle 4$ is comp. to $\angle 5$ and $\angle 6$ is comp. to $\angle 5$, then $\angle 4 \cong \angle 6$. [\cong Complements Thm]
13. If $\angle FOG$ is a right \angle , then $\overrightarrow{DF} \perp \overrightarrow{DG}$. [Def. of \perp]
14. If $\angle FOG \cong \angle GDH$, then $\overrightarrow{DG} \perp \overrightarrow{HF}$. [2 lines form \cong adj. ∠s \rightarrow \perp lines]
17. Given: $\overline{PQ} \perp \overline{QR}$; $\overline{PS} \perp \overline{SR}$; $\angle 1 \cong \angle 4$

Prove: $\angle 2 \cong \angle 5$

Statements	Reasons
① $\overline{PQ} \perp \overline{QR}$; $\overline{PS} \perp \overline{SR}$	① Given
② $\angle 2$ is comp. to $\angle 1$; $\angle 5$ is comp. to $\angle 4$	② Ext. sides $\perp \rightarrow$ adj. comp. ∠s
③ $\angle 1 \cong \angle 4$	③ Given
④ $\angle 2 \cong \angle 5$	④ \cong Complements Thm



22. Given: $m\angle 1 = m\angle 2$; $m\angle 3 = m\angle 4$

Prove: $\overline{YS} \perp \overline{XZ}$

Statements	Reasons
① $m\angle 1 = m\angle 2$; $m\angle 3 = m\angle 4$	① Given
② $m\angle 1 + m\angle 2 + m\angle 3 + m\angle 4 = 180^\circ$	② ∠ Add Post.
③ $2m\angle 1 + 2m\angle 3 = 180^\circ$	③ Substi. Prop. of = (① \rightarrow ②) / Dist. Prop
④ $m\angle 1 + m\angle 3 = 90^\circ$	④ Division Prop. of =
⑤ $\angle 1$ is comp. to $\angle 3$	⑤ Def. of Comp. ∠s
⑥ $\overline{YS} \perp \overline{XZ}$	⑥ Adj comp. ∠s \rightarrow Ext. sides \perp

