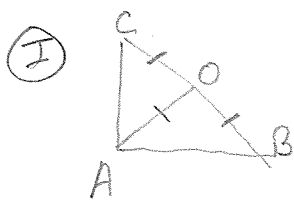


PROOF PRACTICE - DAY 2 ANSWER KEY



① O midpt of \overline{BC} \rightarrow ② $\left. \begin{array}{l} \overline{OC} \cong \overline{OB} \\ \overline{OA} \cong \overline{OB} \end{array} \right\} \rightarrow$ ④ $\overline{OA} \cong \overline{OC} \rightarrow$ ⑤ $\triangle AOC$ is isosceles

- ① Given
- ② Def. of midpt.
- ③ Given
- ④ Transitive Prop.
- ⑤ Def. of isosceles. \triangle : A \triangle with 2 sides \cong is an isos. \triangle .

II

① $\left. \begin{array}{l} \overline{PQ} \cong \overline{RS} \\ \overline{QS} \cong \overline{ST} \end{array} \right\} \rightarrow$ ② $\left. \begin{array}{l} PQ = RS \\ QS = ST \end{array} \right\} \rightarrow$ ③ $PQ + QS = RS + ST \rightarrow$ ④ $\left. \begin{array}{l} PQ + QS = PS \\ RS + ST = RT \end{array} \right\}$

⑤ $PS = RT \rightarrow$ ⑥ $\overline{PS} \cong \overline{RT}$

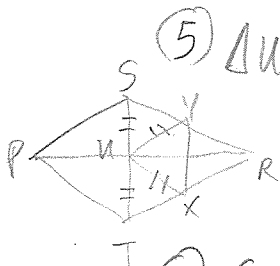
- ① Given
- ② Def. of \cong segments
- ③ Addition Property
- ④ Segment Addition Postulate
- ⑤ Substitution Prop.
- ⑥ Def. of \cong segments

III

① $\left. \begin{array}{l} D \text{ midpt of } \overline{CE} \\ E \text{ midpt of } \overline{DF} \end{array} \right\} \rightarrow$ ② $\left. \begin{array}{l} \overline{CD} \cong \overline{DE} \\ \overline{DE} \cong \overline{EF} \end{array} \right\} \rightarrow$ ③ $\overline{CD} \cong \overline{EF}$

- ① Given
- ② Def. of midpoint
- ③ Transitive Property

(IV) ① \overline{PR} bisects \overline{ST} \rightarrow ② $\overline{SU} \cong \overline{UT}$ } \rightarrow ④ $\overline{UY} \cong \overline{UT}$
 ③ $\overline{UY} \cong \overline{SU}$ } \rightarrow ⑥ $\overline{UY} \cong \overline{UX}$



⑤ $\triangle UYX$ equilateral

⑦ $\overline{TU} \cong \overline{UX}$

① Given

② Def of segment bisector

③ Given

④ Transitive property

⑤ Given

⑥ Def of equilateral \triangle : 3 \cong sides.

⑦ Transitive Property

(V)

① $\overleftrightarrow{BC} \perp \overleftrightarrow{AD} \rightarrow$ ② $\sphericalangle 1$ complement $\sphericalangle 2$
 $\sphericalangle 3$ complement $\sphericalangle 4$ } \rightarrow ④ $\sphericalangle 1 \cong \sphericalangle 4$
 ③ $\sphericalangle 2 \cong \sphericalangle 3$

① Given

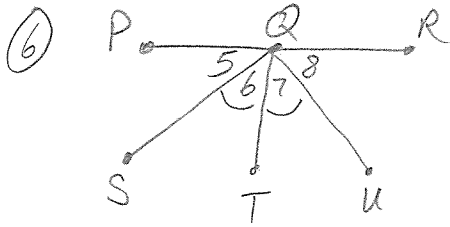
② 2 ext. sides with 2 acute adj. \sphericalangle s $\perp \rightarrow$ 2 comple. \sphericalangle s.

③ Given

④ 2 \sphericalangle s complement $\cong \sphericalangle$ s \rightarrow 2 \sphericalangle s \cong .

Proofs Practice - Day 2

Answer KEY



- ① $\overline{TQ} \perp \overline{PR} \rightarrow$ ② $\begin{cases} \angle 5 \text{ complements } \angle 6 \\ \angle 8 \text{ complements } \angle 7 \end{cases} \rightarrow$ ⑤ $\angle 5 \cong \angle 8$
 ③ \overline{QT} bisects $\angle SQU \rightarrow$ ④ $\angle 6 \cong \angle 7$

- ① Given
 ② Exterior sides \rightarrow acute adj \angle s \rightarrow 2 Complementary \angle s.
 ③ Given
 ④ Def. of angle bisector
 ⑤ Congruent complements thm



- ① $\overline{GI} \cong \overline{HJ}$ \rightarrow ② $\begin{cases} \overline{GH} \cong \overline{IJ} \\ \overline{IK} \cong \overline{JL} \end{cases} \rightarrow$ ③ $\overline{GL} \cong \overline{KL}$

- ① Given
 ② Common segments thm: If \cong segmts subtracted from \cong segmts, results \cong .
 ③ Transitive Property

