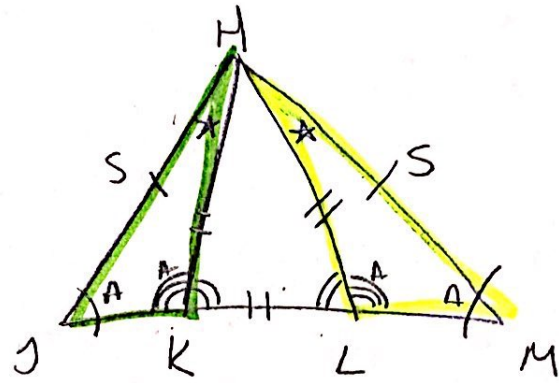


- 23 Given: $\triangle HJM$ is isosceles
 $\triangle HKL$ is equilateral
 $\angle JKH$ and $\angle HKL$ are supp
 $\angle HLK$ and $\angle MLH$ are supp

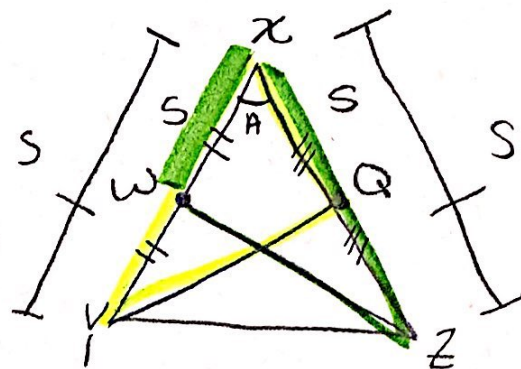


Prove: $\angle JHK \cong \angle MHL$

Statements	Reasons
① $\triangle HJM$ is isosceles (Base JM) $\triangle HKL$ is equilateral $\angle JKH$ and $\angle HKL$ are supp $\angle HLK$ and $\angle MLH$ are supp diagram	① Given
② $\overline{JH} \cong \overline{HM}$	② If a \triangle is an isosceles \triangle , then 2 sides are \cong .
③ $\angle J \cong \angle M$	③ If \triangle , then \triangle .
④ $\overline{HK} \cong \overline{HL} \cong \overline{KL}$	④ If a \triangle is an equilateral \triangle , then its sides are \cong .
⑤ $\angle HKL \cong \angle HLK$	⑤ If \triangle , then \triangle .
⑥ $\angle JKH \cong \angle MLH$	⑥ If 2 \angle s are supp. to $\cong \angle$ s, then they are \cong .
⑦ $\triangle JKH \cong \triangle MLH$	⑦ AAS (6, 3, 2)
⑧ $\angle JHK \cong \angle MHL$	⑧ CPCTC

24

Given: $\overline{XY} \cong \overline{XZ}$
 W is the MP of \overline{XY}
 Q is the MP of \overline{XZ}



Prove: $\overline{WZ} \cong \overline{QY}$

Statements	Reasons
<p>(S) (1) $\overline{XY} \cong \overline{XZ}$ W is the MP of \overline{XY} Q is the MP of \overline{XZ} diagram</p>	(1) Given
(A) (2) $\angle X \cong \angle X$	(2) Reflexive POC
<p>(3) $\overline{WY} \cong \overline{WX}$ $\overline{XQ} \cong \overline{QZ}$</p>	(3) IF a pt is the midpoint, then it divides the seg into 2 \cong segs.
(S) (4) $\overline{WX} \cong \overline{XQ}$	(4) IF segs are \cong , then their like divisions are \cong .
(5) $\triangle YXW \cong \triangle ZXQ$	(5) SAS (1, 2, 4)
(6) $\overline{WZ} \cong \overline{QY}$	(6) CPCTC