

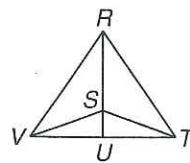
4-6

Practice

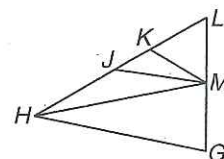
Isosceles Triangles

Refer to the figure.

- If $\overline{RV} \cong \overline{RT}$, name two congruent angles.
- If $\overline{RS} \cong \overline{SV}$, name two congruent angles.
- If $\angle SRT \cong \angle STR$, name two congruent segments.
- If $\angle STV \cong \angle SVT$, name two congruent segments.



Triangles GHM and HJM are isosceles, with $\overline{GH} \cong \overline{MH}$ and $\overline{HJ} \cong \overline{MJ}$. Triangle KLM is equilateral, and $m\angle HMK = 50$. Find each measure.



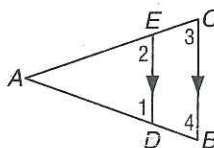
- $m\angle KML$
- $m\angle HMG$
- $m\angle GHM$
- If $m\angle HJM = 145$, find $m\angle MHJ$.
- If $m\angle G = 67$, find $m\angle GHM$.

10. Write a two-column proof.

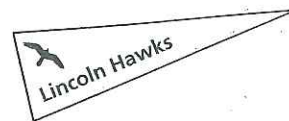
Given: $\overline{DE} \parallel \overline{BC}$

$\angle 1 \cong \angle 2$

Prove: $\overline{AB} \cong \overline{AC}$



11. **SPORTS** A pennant for the sports teams at Lincoln High School is in the shape of an isosceles triangle. If the measure of the vertex angle is 18, find the measure of each base angle.



NAME _____

DATE _____

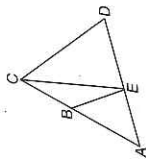
PERIOD _____

4-6 Skills Practice

Isosceles Triangles

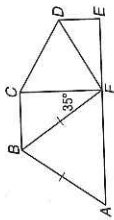
Refer to the figure.

- If $\overline{AC} \cong \overline{AD}$, name two congruent angles.
 $\angle ACD \cong \angle CDA$
- If $\overline{BE} \cong \overline{BC}$, name two congruent angles.
 $\angle BEC \cong \angle BCE$
- If $\angle EBA \cong \angle EAB$, name two congruent segments.
 $\overline{EB} \cong \overline{EA}$
- If $\angle CED \cong \angle CDE$, name two congruent segments.
 $\overline{CE} \cong \overline{CD}$



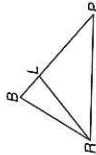
$\triangle ABF$ is isosceles, $\triangle CDF$ is equilateral, and $m\angle AFD = 150$. Find each measure.

- $m\angle CFD$ **60**
- $m\angle ABF$ **70**
- $m\angle AFB$ **55**
- $m\angle A$ **55**



In the figure, $\overline{PL} \cong \overline{RL}$ and $\overline{LR} \cong \overline{BR}$.

- If $m\angle RLP = 100$, find $m\angle BRL$. **20**
- If $m\angle LPR = 34$, find $m\angle B$. **68**



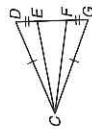
Write a two-column proof.

Given: $\overline{CD} \cong \overline{CG}$
 $\overline{DE} \cong \overline{GF}$

Prove: $\overline{CE} \cong \overline{CF}$

Proof:

Statements	Reasons
1. $\overline{CD} \cong \overline{CG}$	1. Given
2. $\angle D \cong \angle G$	2. If 2 sides of a \triangle are \cong , then the \angle opposite those sides are \cong .
3. $\overline{DE} \cong \overline{GF}$	3. Given
4. $\triangle CDE \cong \triangle CGF$	4. SAS
5. $\overline{CE} \cong \overline{CF}$	5. CPCTC



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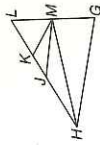
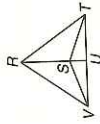
NAME _____

4-6 Practice (Average)

Isosceles Triangles

Refer to the figure.

- If $\overline{RV} \cong \overline{RT}$, name two congruent angles. **$\angle RTV \cong \angle RV T$**
 - If $\overline{RS} \cong \overline{SV}$, name two congruent angles. **$\angle SVR \cong \angle SV S$**
 - If $\angle SRT \cong \angle STR$, name two congruent segments. **$\overline{ST} \cong \overline{SR}$**
 - If $\angle STV \cong \angle SVT$, name two congruent segments. **$\overline{ST} \cong \overline{SV}$**
- Triangles GHM and HJM are isosceles, with $\overline{GH} \cong \overline{MH}$ and $\overline{HJ} \cong \overline{MJ}$. Triangle KLM is equilateral, and $m\angle HMK = 50$. Find each measure.
- $m\angle KML$ **60**
 - $m\angle HMG$ **70**
 - $m\angle GHM$ **40**



- If $m\angle HJM = 145$, find $m\angle MHJ$. **17.5**
- If $m\angle G = 67$, find $m\angle GHM$. **46**

Write a two-column proof.

Given: $\overline{DE} \parallel \overline{BC}$
 $\angle 1 \cong \angle 2$

Prove: $\overline{AB} \cong \overline{AC}$

Proof:

Statements	Reasons
1. $\overline{DE} \parallel \overline{BC}$	1. Given
2. $\angle 1 \cong \angle 4$ $\angle 2 \cong \angle 3$	2. Corr. \angle are \cong .
3. $\angle 1 \cong \angle 2$	3. Given
4. $\angle 3 \cong \angle 4$	4. Congruence of \angle is transitive.
5. $\overline{AB} \cong \overline{AC}$	5. If 2 \angle of a \triangle are \cong , then the sides opposite those \angle are \cong .



- SPORTS** A pennant for the sports teams at Lincoln High School is in the shape of an isosceles triangle. If the measure of the vertex angle is 18, find the measure of each base angle. **81, 81**

