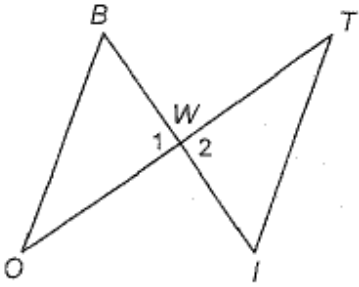**4.7 - 4.8 worksheet**   Name: _____

Complete the proofs below.

Given: $\angle O \cong \angle T$
W is the midpoint
of $\overline{OT}$

Prove: $\angle B \cong \angle I$
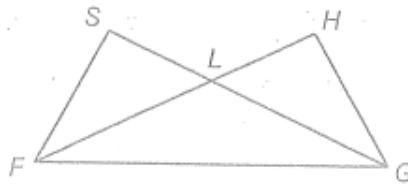
Conclusions	Justifications

B   T

W
1   2

O   I

Given: $\angle SFG \cong \angle HGF$
$\overline{FS} \cong \overline{GH}$

Prove: $\overline{FH} \cong \overline{GS}$

S   H

L

F   G

Hint: Look for two
triangles that overlap
and share a part.

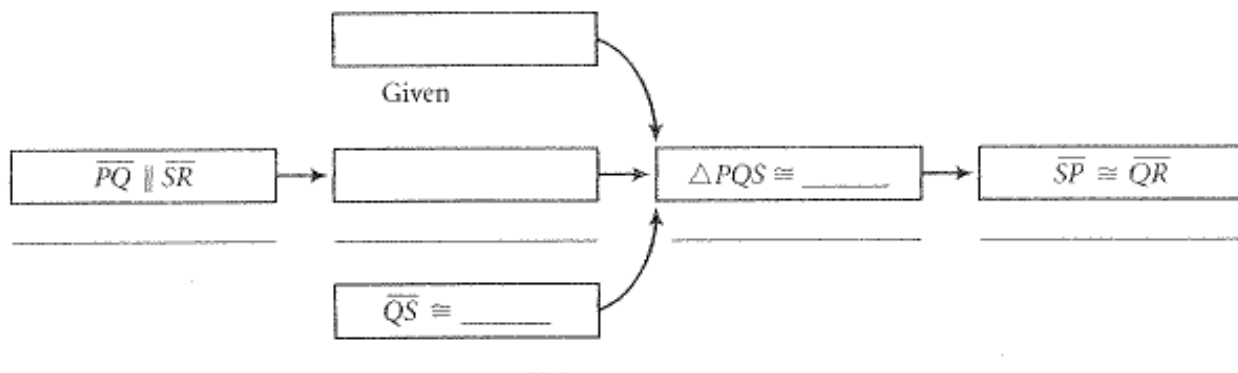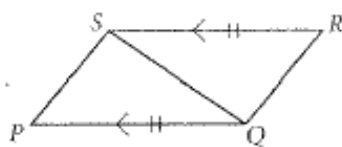| Conclusions	Justifications

4.7 - 4.8 worksheet   Name: _____

Complete the flowchart for each proof.

Given: $\overline{PQ} \parallel \overline{SR}$ and $\overline{PQ} \cong \overline{SR}$
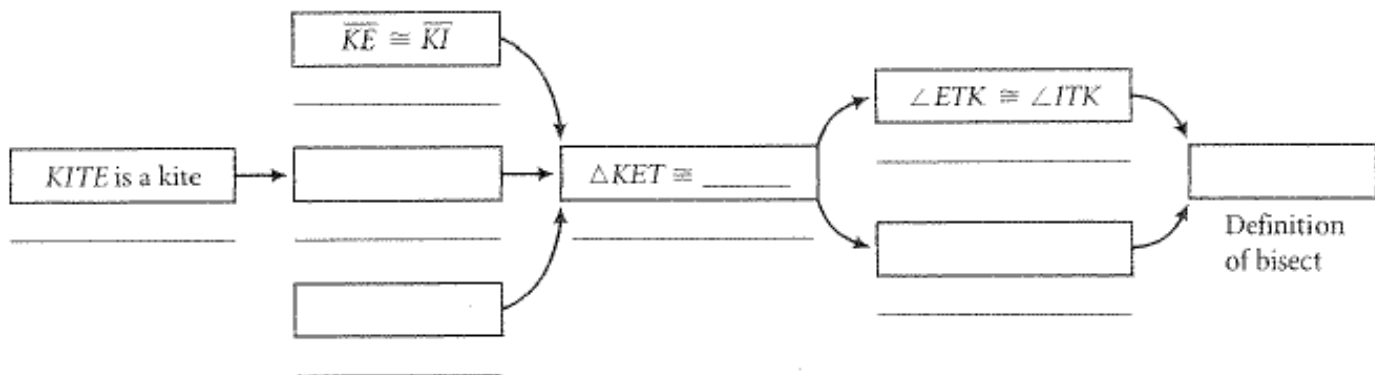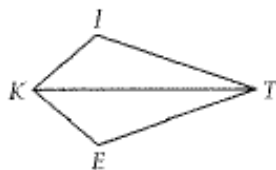
Show: $\overline{SP} \cong \overline{QR}$

Flowchart Proof

	Given

$\overline{PQ} \parallel \overline{SR}$ → ☐ → $\triangle PQS \cong$ _____ → $\overline{SP} \cong \overline{QR}$

_____

$\overline{QS} \cong$ _____

_____

Given: Kite $KITE$ with $\overline{KE} \cong \overline{KI}$

Show: $\overline{KT}$ bisects $\angle EKI$ and $\angle ETI$

Flowchart Proof

$\overline{KE} \cong \overline{KI}$

_____

$KITE$ is a kite → ☐ → $\triangle KET \cong$ _____ → $\angle ETK \cong \angle ITK$ → ☐ Definition of bisect

_____   _____   _____

☐

☐

_____

In Exercises 1–3, $\triangle ABC$ is isosceles with $\overline{AC} \cong \overline{BC}$

1. Perimeter $\triangle ABC = 48$ ⓗ
   $AC = 18$
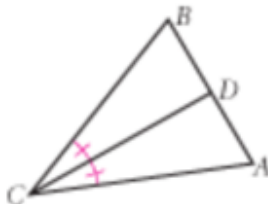 $AD = $ _?_

2. $m\angle ABC = 72°$
   $m\angle ADC = $ _?_
   $m\angle ACD = $ _?_

3. $m\angle CAB = 45°$
   $m\angle ACD = $ _?_