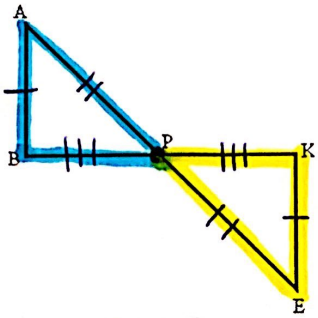
Unit 2 Day 6 Name: Key

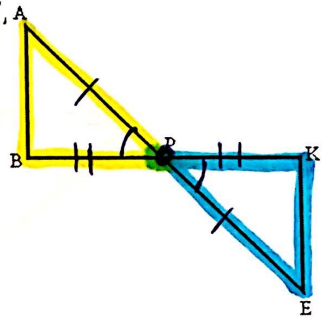
Complete each missing statement or justification. As you complete the proof, MARK the picture to show pairs of corresponding congruent sides or angles.

1. Given: $\overline{AB} \cong \overline{EK}$, $\overline{AP} \cong \overline{EP}$,
P is the midpoint of BK
Prove: $\Delta ABP \cong \Delta EKP$



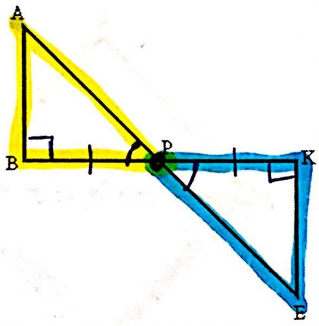
Statements	Justification
$\overline{AB} \cong \overline{EK}$	Given
$\overline{AP} \cong \overline{EP}$	Given
P is the midpoint of BK	Given
$\overline{BP} \cong \overline{KP}$	Definition of Midpoint
$\Delta ABP \cong \Delta EKP$	SSS

2. Given: P is the midpoint of $\overline{AE}$,
$\overline{BP} \cong \overline{KP}$
Prove: $\Delta ABP \cong \Delta EKP$



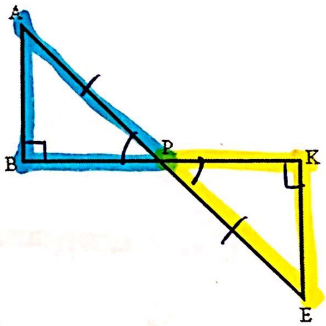
Statements	Justification
P is the midpoint $\overline{AE}$	Given
$\overline{AP} \cong \overline{EP}$	Definition of Midpoint
$\overline{BP} \cong \overline{KP}$	Given
$\angle APB \cong \angle EPK$	Vertical angles are $\cong$
$\Delta ABP \cong \Delta EKP$	SAS

3. Given: $\angle B$ and $\angle K$ are right angles,
P is the midpoint of $\overline{BK}$
Prove: $\Delta ABP \cong \Delta EKP$



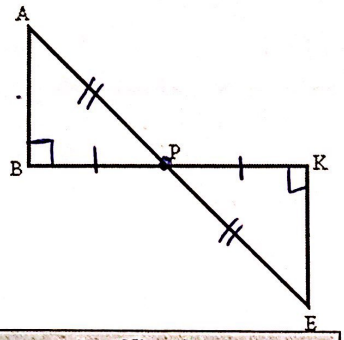
Statements	Justification
$\angle B$ and $\angle K$ are right $\angle$s	Given
$\angle ABP \cong \angle EKP$	All right angles are $\cong$.
P is the midpoint of $\overline{BK}$	Given
$\overline{BP} \cong \overline{KP}$	Definition of Midpoint
$\angle APB \cong \angle EPK$	Vertical angles are $\cong$.
$\Delta ABP \cong \Delta EKP$	ASA

4. Given: : $\angle B$ and $\angle K$ are right angles,
$\overline{AP} \cong \overline{EP}$
Prove: $\Delta ABP \cong \Delta EKP$



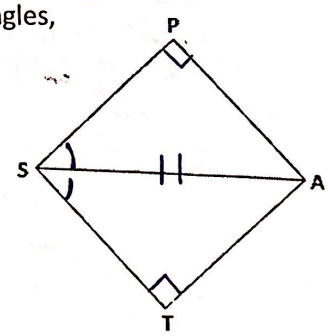
Statements	Justification
$\angle B$ and $\angle K$ are right $\angle$s	Given
$\angle ABP \cong \angle EKP$	all Right $\angle$s $\cong$
$\angle APB \cong \angle EPK$	Vertical $\angle$s are $\cong$
$\Delta ABP \cong \Delta EKP$	AAS
$\overline{AP} \cong \overline{EP}$	Given

5. Given: : $\angle B$ and $\angle K$ are right angles,
P is the midpoint of $\overline{AE}$ and $\overline{BK}$
Prove: $\Delta ABP \cong \Delta EKP$



Statements	Justification
$\angle B$ and $\angle K$ are Right $\angle$s	Given
$\angle B \cong \angle K$	all Right $\angle$s are congruent
P is the midpoint of $\overline{AE}$ & $\overline{BK}$	Given
$\overline{AP} \cong \overline{EP}$ and $\overline{BP} \cong \overline{KP}$	Definition of Midpoint
$\Delta ABP \cong \Delta EKP$	HL

6. Given: $\angle P$ and $\angle T$ are right angles,
$\angle PSA \cong \angle TSA$
Prove: $\Delta PSA \cong \Delta TSA$



Statements	Justification
$\angle P$ and $\angle T$ are right angles	Given
$\angle P \cong \angle T$	all Right $\angle$s are $\cong$
$\angle PSA \cong \angle TSA$	Given
$\overline{SA} \cong \overline{SA}$	Reflexive Property of $\cong$
$\Delta PSA \cong \Delta TSA$	AAS

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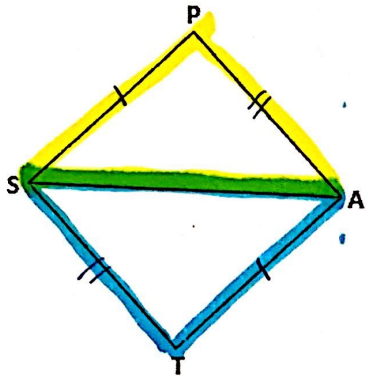
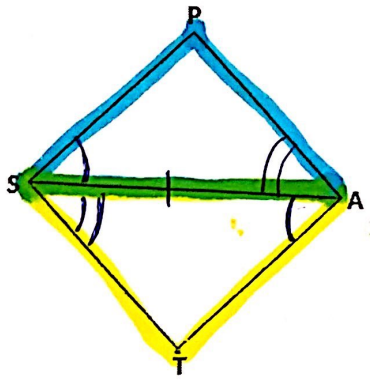
7. Given: $\overline{PS} \cong \overline{TA}$, $\overline{PA} \cong \overline{TS}$
Prove: $\Delta PSA \cong \Delta TAS$



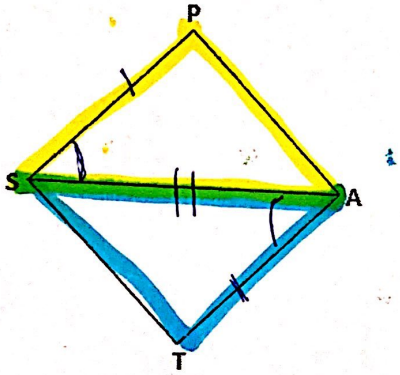
Statements	Justification
$\overline{PS} \cong \overline{TA}$	Given
$\overline{PA} \cong \overline{TS}$	Given
$\overline{SA} \cong \overline{SA}$	Reflexive Prop of $\cong$
$\Delta PSA \cong \Delta TAS$	SSS

8. Given: $\angle PSA \cong \angle TAS$; $\angle TSA \cong \angle PAS$
Prove: $\Delta PSA \cong \Delta TAS$



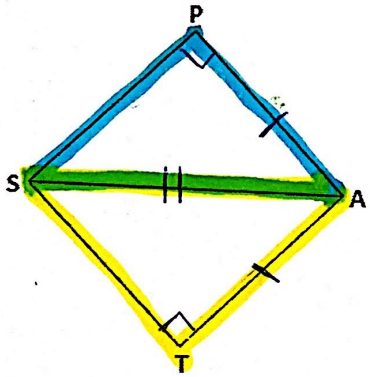
Statements	Justification
$\angle PSA \cong \angle TAS$	Given
$\angle TSA \cong \angle PAS$	Given
$\overline{SA} \cong \overline{SA}$	Reflexive Prop. of $\cong$
$\Delta PSA \cong \Delta TAS$	ASA

9. Given: $\angle PSA \cong \angle TAS$, $\overline{PS} \cong \overline{TA}$
Prove: $\Delta PSA \cong \Delta TAS$



Statements	Justification
$\angle PSA \cong \angle TAS$	Given
$\overline{PS} \cong \overline{TA}$	Given
$\overline{SA} \cong \overline{SA}$	Reflexive Prop of $\cong$
$\Delta PSA \cong \Delta TAS$	SAS

10. Given: $\angle P$ and $\angle T$ are right angles, $\overline{PA} \cong \overline{TA}$
Prove: $\Delta PAS \cong \Delta TAS$



Statements	Justification
$\angle P$ and $\angle T$ are Rt. $\angle$s	Given
$\angle P \cong \angle T$	all Rt. $\angle$s are $\cong$
$\overline{PA} \cong \overline{TA}$	Given
$\overline{SA} \cong \overline{SA}$	Reflexive Prop. of $\cong$
$\Delta PAS \cong \Delta TAS$	HL

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