

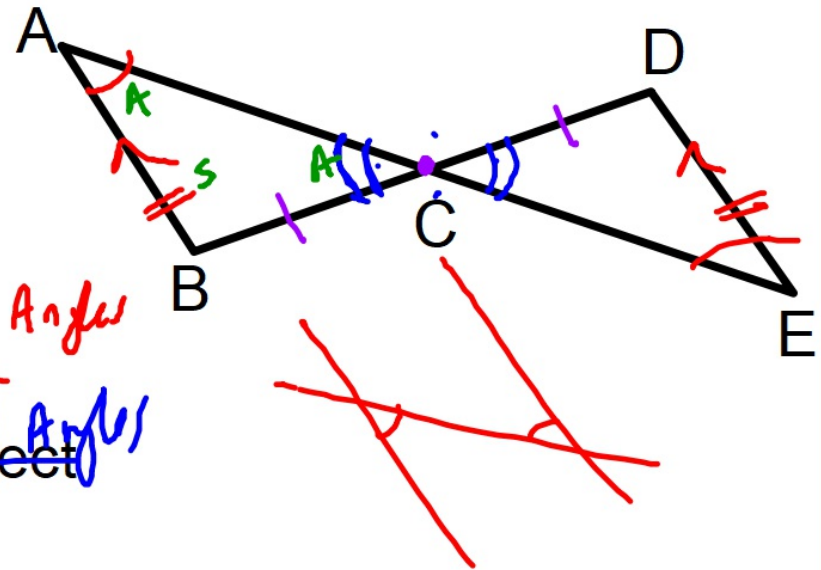
Good afternoon and welcome back

Warm up: read over this proof and find the mistakes (if any).

Given: $\overline{AB} \cong \overline{DE}$, $\overline{AB} \parallel \overline{DE}$

Prove: C is the midpoint of BD

Statements	Reasons
$\overline{AB} \cong \overline{DE}$, $\overline{AB} \parallel \overline{DE}$	given ✓
$\angle A \cong \angle E$ ✓	vertical angles <i>Alt. Int Angles</i>
$\angle \overset{A\hat{C}B}{B} \cong \angle \overset{E\hat{C}D}{C}$	definition of bisect <i>vertical angles</i>
$\triangle ABC \cong \triangle EDC$ ✓	SSA <i>AAS</i>
$\overline{BC} \cong \overline{DC}$	<i>CPCTC</i>
C is the midpoint of BD ✓	prove <i>Def'n of midpoint</i>



Visibly Random Grouping

Assessments are being passed back

HW needed for retakes:

SRT-B5a: p. 158 #8-12

SRT-B5b: "More Proof Practice" handout

CO-A4a: video notes on "sequences of rigid motions"

CO-B7a: p. 146 #6-11

CO-B8a: most recent practice test completed

Retakes available Tues 4-5p and in every DS except Weds

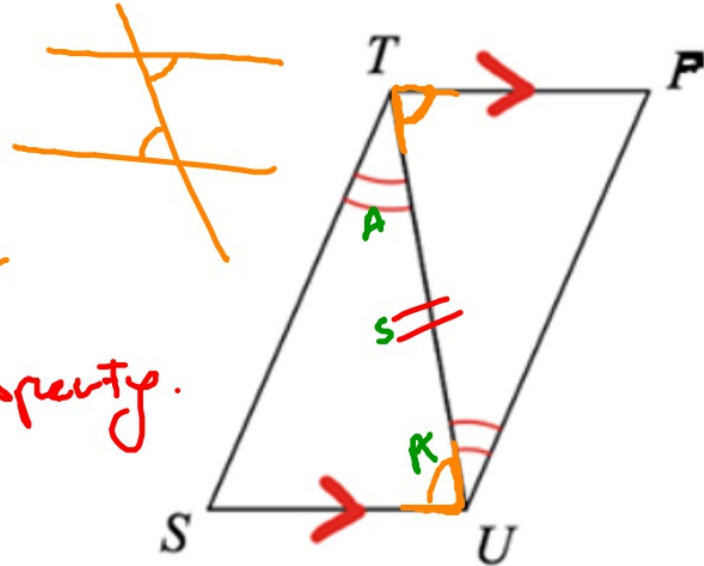
ELF: SRT-B5a

1. Complete the proof using the statements and reasons provided. *Not all can nor will be used.*

IVEN: $\overline{SU} \parallel \overline{PT}$, $\angle STU \cong \angle PUT$

ROVE: $\triangle SUT \cong \triangle PTU$

Statements	Reasons
$\overline{SU} \parallel \overline{PT}$, $\angle STU \cong \angle PUT$	1. <i>Given</i>
$\angle TUS \cong \angle UTP$	2. <i>Alt. Int Angles</i>
$\overline{TU} \cong \overline{UT}$	3. <i>Reflexive Property.</i>
$\triangle SUT \cong \triangle PTU$	4. <i>ASA</i>



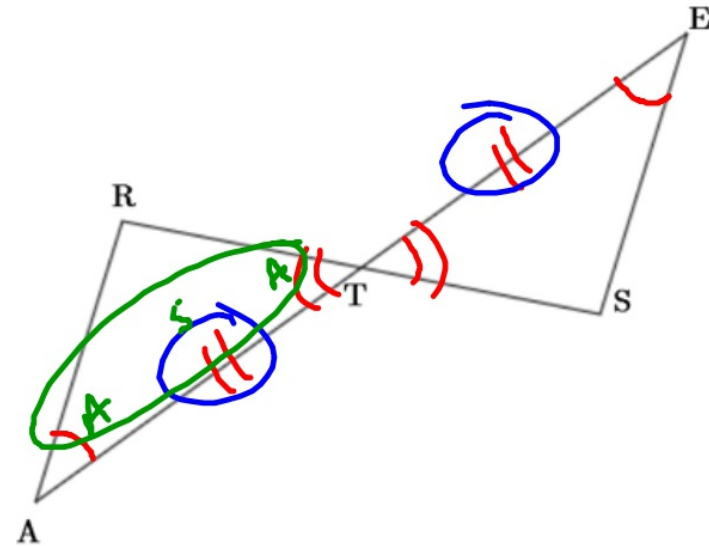
choices for #1

SS	SAS	AAS	SSA	Given	Vertical Angles	<u>Alternate Interior Angles</u>
ove	AAA	ASA	Reflexive Property	Def. of bisect	$\overline{TS} \cong \overline{UP}$	

Given: $\angle A \cong \angle E$, T is the midpoint of \overline{AE}

Prove: $\overline{AR} \cong \overline{ES}$

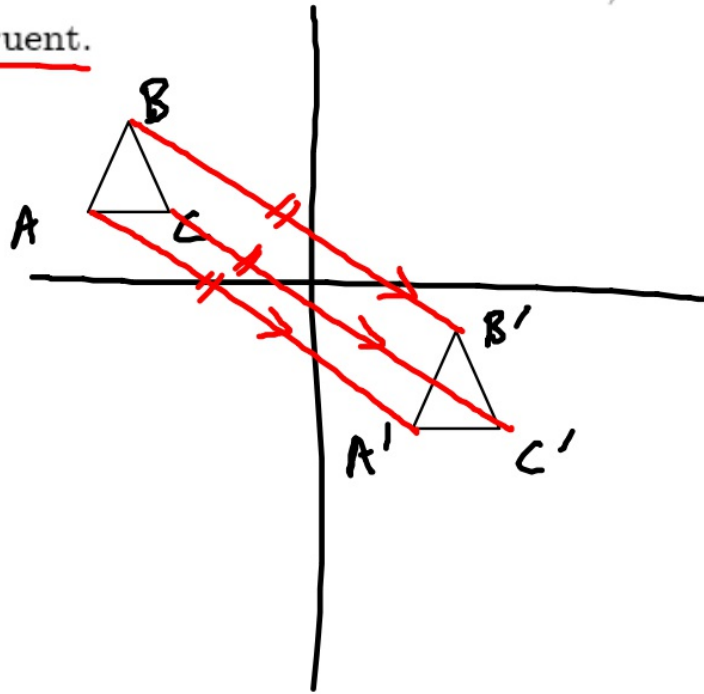
Statements	Reasons
1. $\angle A \cong \angle E$, T is the midpoint of \overline{AE}	1. Given
2. $\angle ATR \cong \angle ETS$	2. Vertical Angles
3. $\overline{AT} \cong \overline{ET}$	3. Def. of midpoint
4. $\triangle RAT \cong \triangle SET$	4. ASA
5. $\overline{AR} \cong \overline{ES}$	5. CPCTC



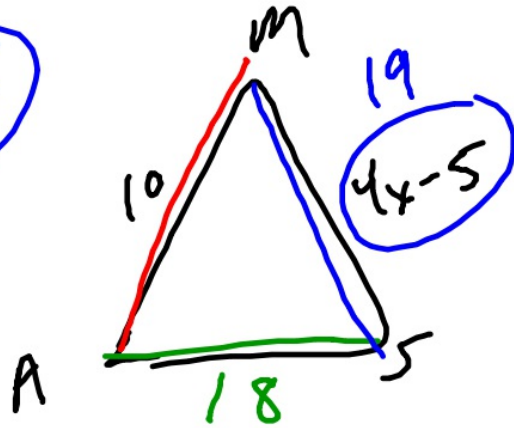
Possible choices for #2, feel free to ignore

SSS	ASA	AAS	CPCTC	$\overline{AT} \cong \overline{ET}$
$\angle ATR \cong \angle ETS$	Alternate Interior Angles		Vertical angles	Def. of midpoint
$\triangle ART \cong \triangle EST$	$\overline{AR} \cong \overline{ES}$	HL	Reflexive Property	$\triangle ATR \cong \triangle TES$
				$\overline{RT} \cong \overline{ST}$

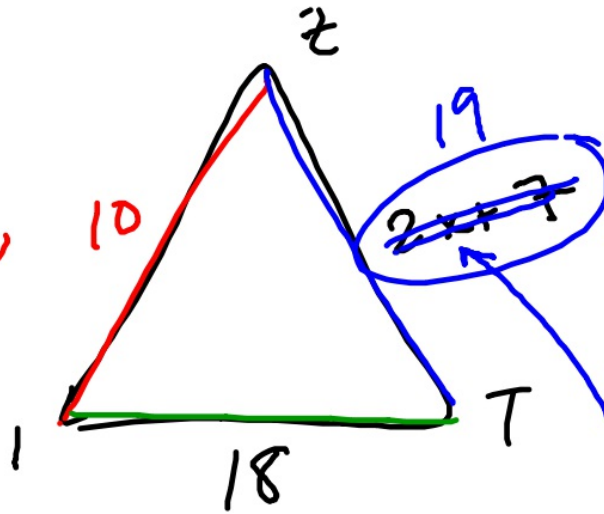
- b. If $\triangle ABC$ is translated to create $\triangle A'B'C'$, then the segments $\overline{AA'}$, $\overline{BB'}$, $\overline{CC'}$ will be parallel but not congruent. ✓



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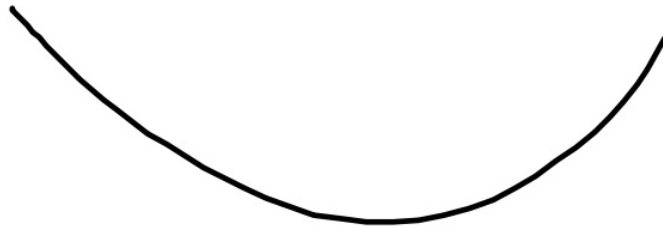


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$$4x-5 = 2x+7$$

$$\underline{\underline{x=6}}$$



Triangle Congruence Proofs Made Easy

privately read with a pencil,
marking the most important
things to remember
about triangle proofs

Triangle Congruence Proofs Made Easy

- Always begin with Given
- SSS/SAS/ASA/AAS/HL ONLY used if the statement has two Δ 's in it.
- Reflexive Property is used for shared sides, and the statement always has the same segment written on both sides of the \cong symbol
- CPCTC is never used if the statement has a Δ symbol in it
- CPCTC must come after SSS/SAS/ASA/AAS/HL and never before.
- Can only use HL if it's a right triangle
- Use the "definition of bisect" as a reason to state that two segments or angles are congruent if they are not given (so long as word "bisect" is given)
- Always look for vertical angles, shared sides, and alt. interior angles (if given parallel lines)
- Vertical angles always have same middle letter
- "Prove" and "Congruent" are NEVER reasons
- The last statement is always provided to you

Homework



watch and take notes on video at mgeo.weebly.com

The image shows a YouTube video player interface. At the top, there is a search bar with the YouTube logo and a search icon. The video content is a chalkboard with the word "Quadrilaterals" written in white cursive, underlined, and "An introduction" written below it. The video player includes a progress bar showing 0:15 / 8:42, a play button, a volume icon, and a "Created with Doceri" watermark. Below the video player, there are icons for editing, deleting, music, and sharing, along with "Analytics" and "Video Manager" buttons. The video title "quadrilaterals intro" is visible at the bottom.