

Lesson 3.2 | What Makes Triangles the Same?

Unit 3: Proof and Congruence • Student Notes

Notes — Triangle Congruence

Triangle Congruence: Two triangles are congruent if and only if _____

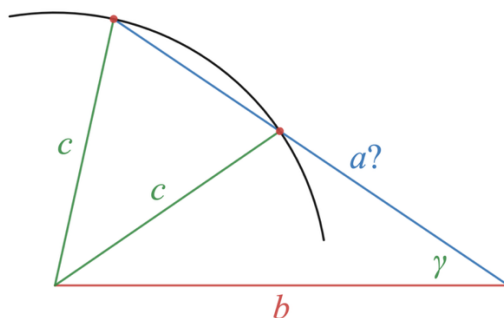
Written as a biconditional:

Triangle Congruence Shortcuts

Shortcut	What it requires	Why it works	Valid?
SSS			
SAS			
ASA			
AAS			
HL			
SSA			
AAA			

Why SSA Fails — Diagram and Explanation

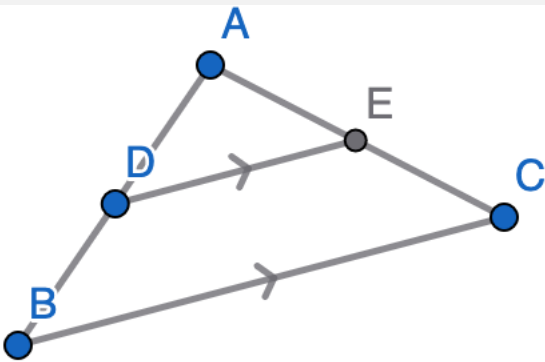
two non-congruent triangles that have the same SSA information:



Explanation:

Why AAA Fails — Diagram and Explanation

Draw triangle ABC . Then draw a line DE parallel to BC , with D on AB and E on AC , to create a smaller triangle ADE . Label all equal angles. Then write the argument as a conditional statement.



Write the argument as a conditional statement:

If $DE \parallel BC$, then _____