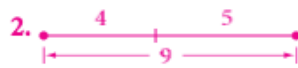


Homework Check

1. yes



no



no

4. yes

5. a, c, b

6. a, b, c

7. v, z, y, w, x

8. By the Triangle Inequality Conjecture, the sum of 21 cm and 25 cm should be greater than 48 cm.

9. $b = 55^\circ$, but $55^\circ + 130^\circ > 180^\circ$, which is impossible by the Triangle Sum Conjecture.

10. 135°

11. 72°

12. $6 < \text{length} < 102$

13. Probability is 0—lengths given are not a triangle

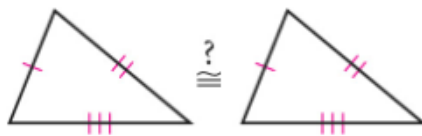
16. ABE

20. $a = 90^\circ, b = 68^\circ, c = 112^\circ, d = 112^\circ, e = 68^\circ, f = 56^\circ, g = 124^\circ, h = 124^\circ$

There are 6 different ways that the three corresponding parts of two triangles may be congruent. Some of these will be congruence shortcuts and some will not.

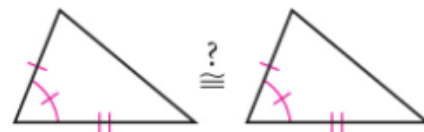
Today we are going to learn about 3:

Side-Side-Side (SSS)



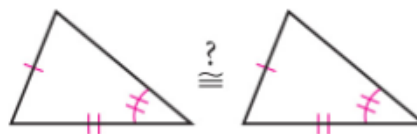
Three pairs of congruent sides

Side-Angle-Side (SAS)



Two pairs of congruent sides and one pair of congruent angles (angles between the pairs of sides)

Side-Side-Angle (SSA)



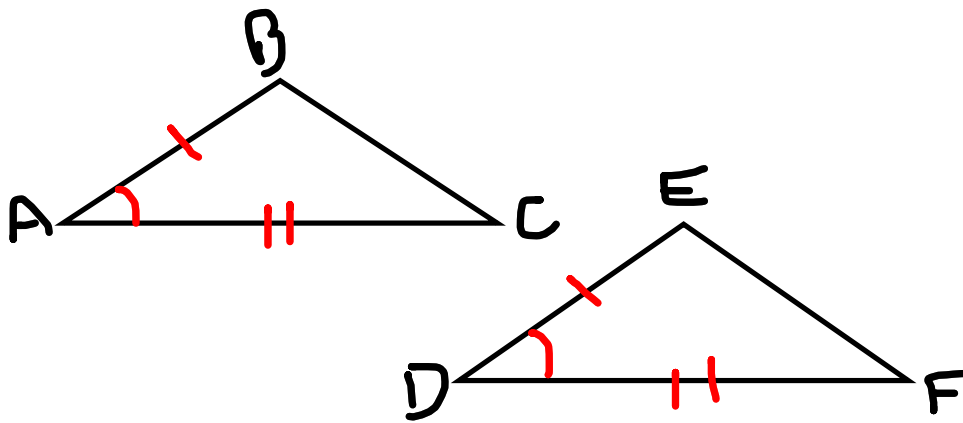
Two pairs of congruent sides and one pair of congruent angles (angles not between the pairs of sides)

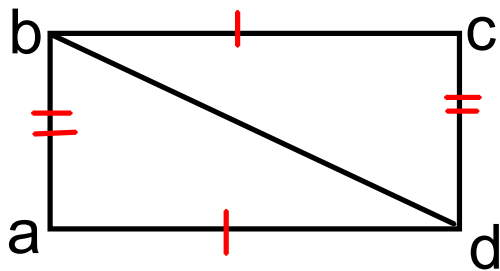
Investigation 4.4 on Sketchpad

SSS Congruence Conjecture: If the three sides of one triangle are congruent to the three sides of another triangle, then

SAS Congruence Conjecture: If two sides and the included angle of one triangle are congruent to two sides and the included angle of another triangle, then

SSA: If two sides and a non-included angle of one triangle are congruent to two sides and a non-included angle of another triangle, then





Given: $\overline{ab} \cong \overline{cd}$

$\overline{bc} \cong \overline{ad}$

Prove: triangle DAB is
congruent to triangle BCD

