

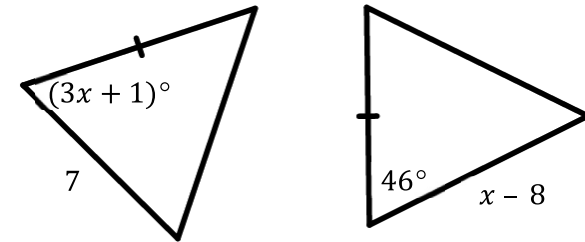
Section 6 – Topic 9

Using Triangle Congruency to Find Missing Variables

How could using congruent triangles be used to find missing angles, sides or variables?

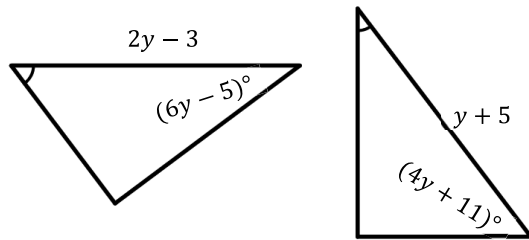
Let's Practice!

1. Consider the figures below.



Find the value of x in order to prove that the two triangles are congruent by the SAS Congruence Postulate. Justify your work.

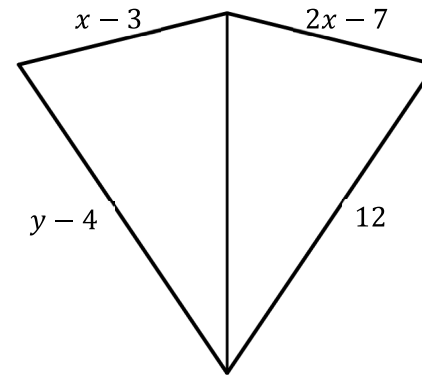
2. Consider the figures below.



Find the value of y that proves the two triangles are congruent using the ASA Congruence Postulate. Justify your work.

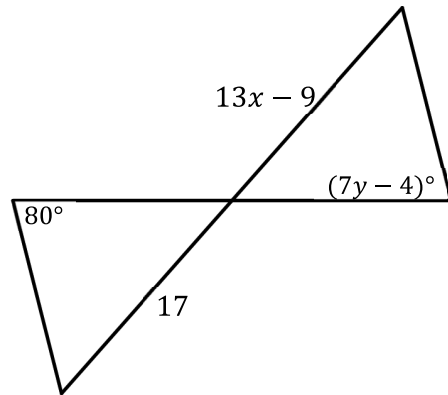
Try It!

3. Consider the figure below.



Find the values of x and y that prove the two triangles are congruent using the SSS Congruence Postulate.

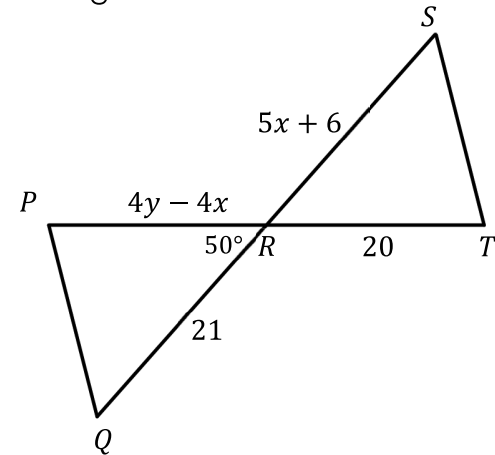
4. Consider the figure below.



Find the values of x and y that prove the two triangles are congruent using the AAS Congruence Theorem. Justify your work.

BEAT THE TEST!

1. Consider the figure below.



Part A: If $\overline{PQ} \cong \overline{TS}$ and $\overline{PQ} \parallel \overline{TS}$, which triangle congruency postulate can we use to determine $\triangle PRQ \cong \triangle TRS$ given the information on the figure?

- (A) AAS
- (B) ASA
- (C) SAS
- (D) SSS

Part B: What are the values of x and y ?

