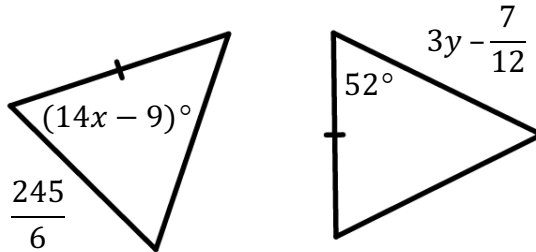


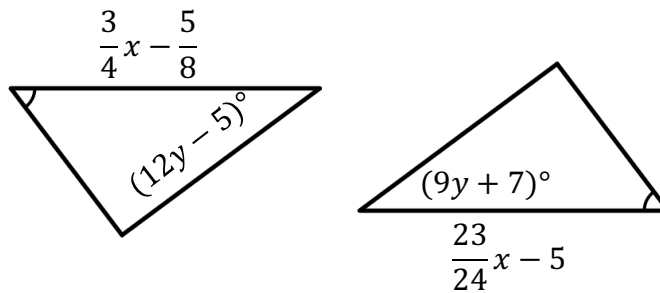
**Triangles – Part 1**  
**Using Triangle Congruency to Find Missing Variables**  
**Independent Practice**

1. Consider the figures below.



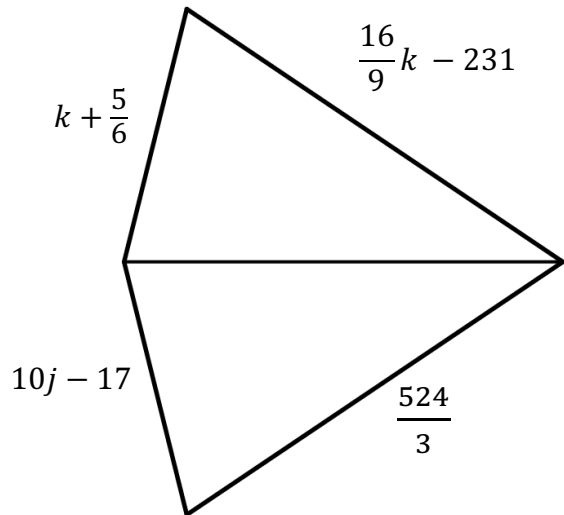
Find the value of  $x$  and  $y$  in order to prove that the two triangles are congruent by the SAS Congruence Postulate. Justify your work.

2. Consider the figures below.



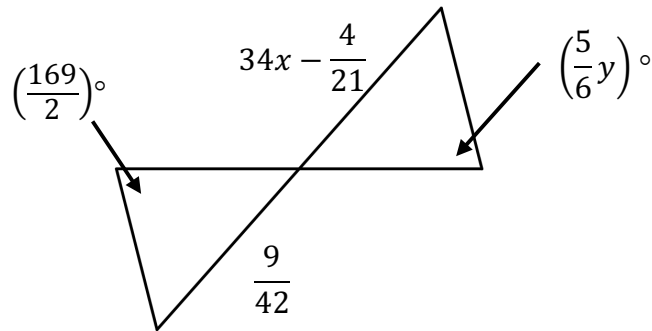
Find the value of  $x$  and  $y$  in order to prove that the two triangles are congruent using the ASA Congruence Postulate. Justify your work.

3. Consider the figure below.



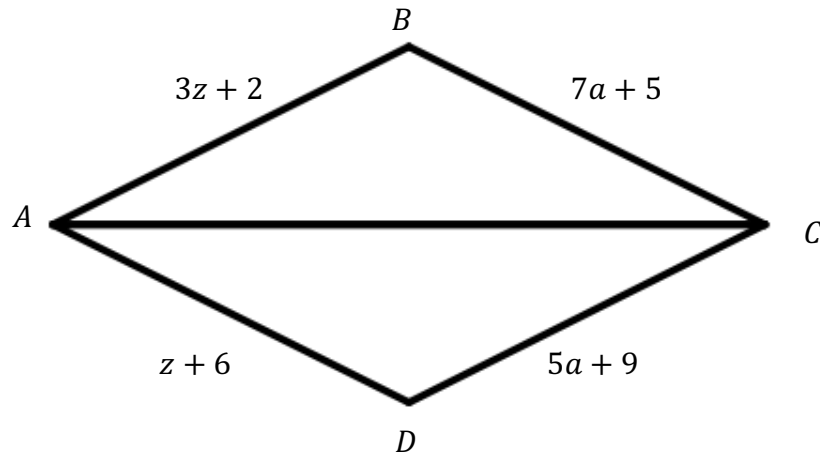
Find the values of  $k$  and  $j$  that prove the two triangles are congruent using the SSS Congruence Postulate.

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.

5. Consider the figure below.



Part A: If  $\overline{AB} \cong \overline{AD}$  and  $\overline{BC} \parallel \overline{CD}$ , then because  $\overline{AC} \cong \overline{AC}$  by the

- (A) transitive
- (B) symmetric
- (C) supplement
- (D) reflexive

property of congruence, it is possible to determine that  $\triangle ABC \cong \triangle ADC$

by

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

Part B: What are the values of  $z$  and  $a$ ?