Congruence: Cumulative Review
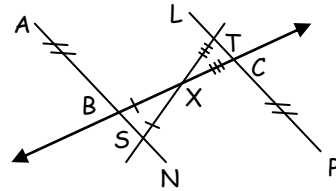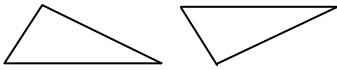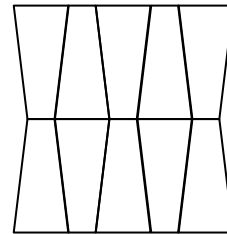
Write a congruence statement.

1.
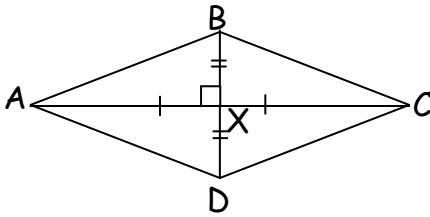
2.

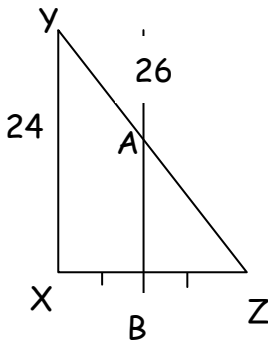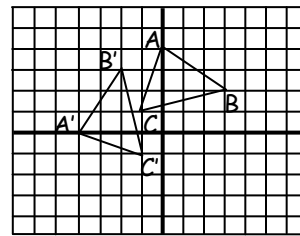Describe the transformation.

3.

4.

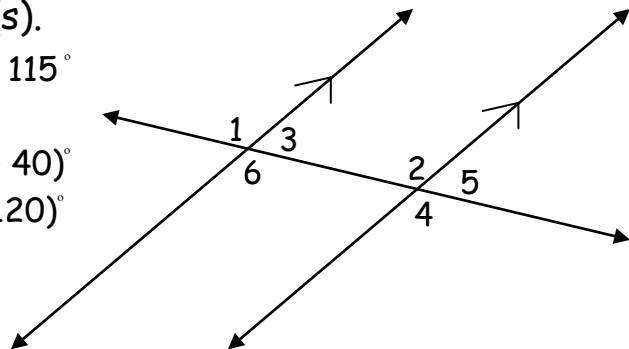Determine whether the following represent a rigid transformation. Explain.

5.

6.

Determine the indicated angle measure(s).

7. $m\angle 2$ if $m\angle 3 = 77°$ 8. $m\angle 4$ if $m\angle 1 = 115°$

9. $m\angle 6 = (2x+1)°$ 10. $m\angle 6 = (60x + 40)°$
   $m\angle 5 = (\frac{1}{2}x - 6)°$ $m\angle 2 = (20x +120)°$

Answer Key

Congruence: Review

1. AX $\overset{\sim}{\cong}$ XC; BX $\overset{\sim}{\cong}$ XD; $\triangle$ABX $\overset{\sim}{\cong}$ $\triangle$ADX(SAS); $\triangle$CBX $\overset{\sim}{\cong}$ $\triangle$CDX (SAS)

2. AN $\overset{\sim}{\cong}$ LP; SX $\overset{\sim}{\cong}$ BX; CX $\overset{\sim}{\cong}$ TX (ST $\overset{\sim}{\cong}$ BC)

3. Reflection and translation.

4. Rotation and translation.

5. No. This is a dilation. Because the size of the object changes, it is not rigid.

6. Yes. Size and shape are retained. The corresponding lengths are congruent.

7. m$\angle$2 =103°

8. m$\angle$4 =115°

9. x =74; m$\angle$6 =149° m$\angle$5 =31°

10. x=2; m$\angle$2 = m$\angle$6 =160°