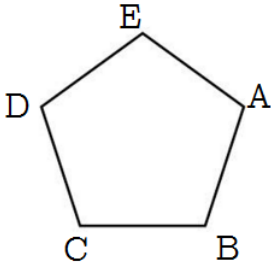
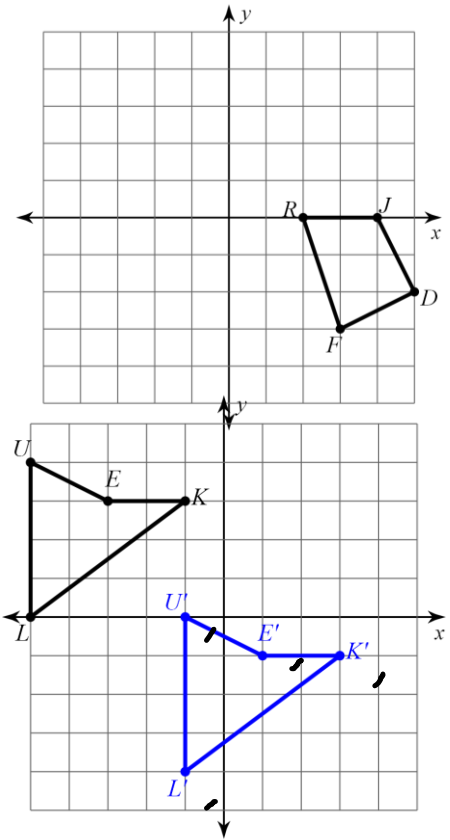


Congruence 1: Transformations:

1. Draw and label the figure after a reflection across the line $x=2$.
2. Describe the term line segment in terms of points, lines, and planes.
3. How many degrees of clockwise rotation would it take for A to be carried onto D? (ABCDE is a regular pentagon.)

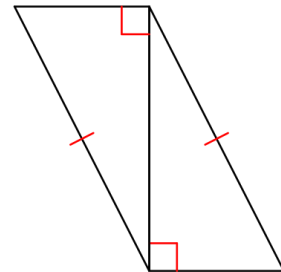
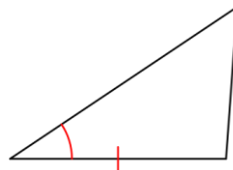
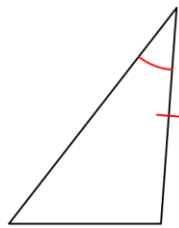
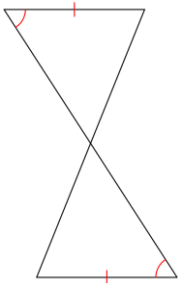


4. Use arrow notation to write a rule that will carry $LUEK$ to $L'U'E'K'$.

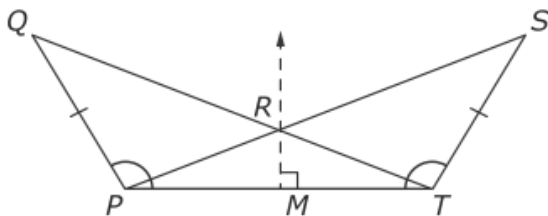


Congruence 2: Triangle Congruence

5. In each pair, are the triangles congruent? If so, what criteria is shown?

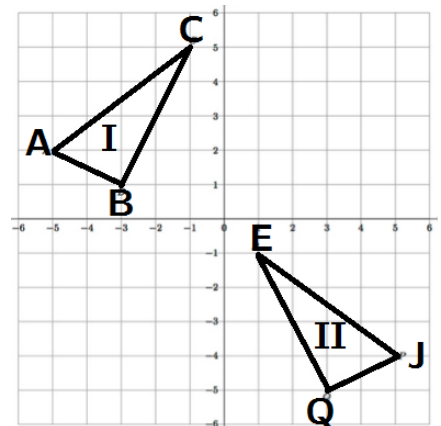


6. Which transformation(s) would show $\Delta QTP \cong \Delta SPT$? Select all that apply.



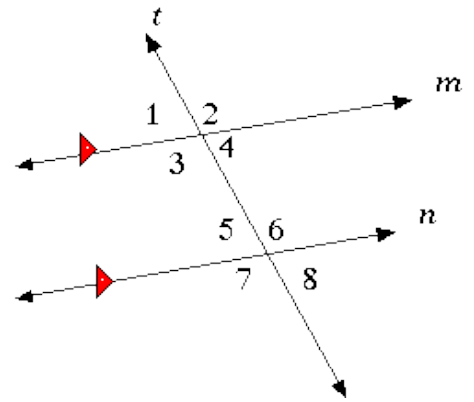
- horizontal translation along the length PR
- horizontal translation along the length of PT
- reflection over RM
- reflection over SP
- rotation around R

7. Figure 1 goes through rigid transformations to become Figure 2. What segment is congruent to CA?



Congruence 3: Parallel Lines and Triangles

8. Name a pair of corresponding angles.
9. Name a pair of alternate interior angles.
10. If $\angle 3 = 14x + 45$ and $\angle 5 = 7x + 30$, what is the value of x ?
11. Complete the proof.



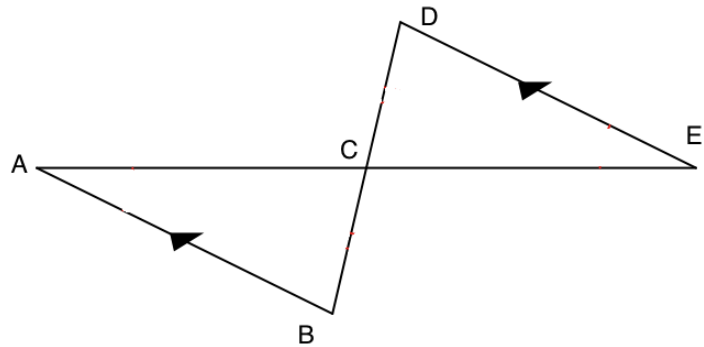
Given: $m \parallel n$ Prove: $\angle 3 \cong \angle 6$

Statements	Reasons
1.	1.
2. $\angle 3 \cong \angle 7$	2.
3. $\angle 7 \cong \angle 6$	3.
4. $\angle 3 \cong \angle 6$	4.

12. Complete the proof.

Given: \overline{AE} bisects \overline{BD} ; $\overline{AB} \parallel \overline{ED}$ Prove: $\overline{AB} \cong \overline{ED}$

Statements	Reasons
1. \overline{AE} bisects \overline{BD} ; $\overline{AB} \parallel \overline{ED}$	1. Given
2. $\angle BCA \cong \angle DCE$	2.
3.	3. Def. of bisect
4. $\angle A \cong \angle E$	4.
5. $\triangle ACB \cong \triangle ECD$	5.
6. $\overline{AB} \cong \overline{ED}$	6.



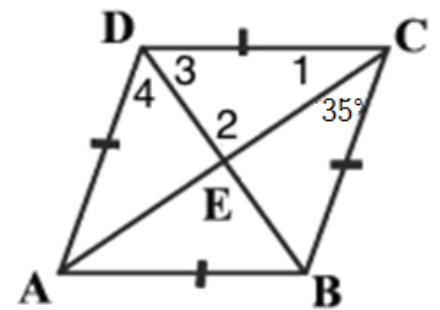
Congruence 4: Quadrilaterals

13. Consider rhombus DCBA with diagonals intersecting at E.

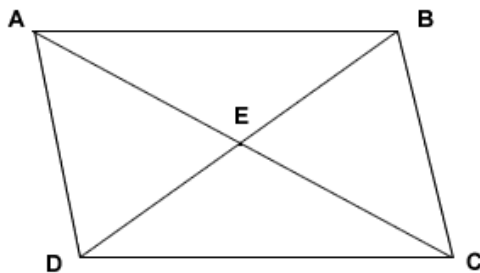
Find the angle measures

$\angle 1 =$ $\angle 2 =$ $\angle 3 =$

$\angle 4 =$ $\angle ABC =$



14. $ABCD$ is a parallelogram. If $BE = 11x - 15$, and $BD = 8x + 12$, find the length of DE .



15. $RSTU$ is a parallelogram. Find the measure of the indicated angle.

