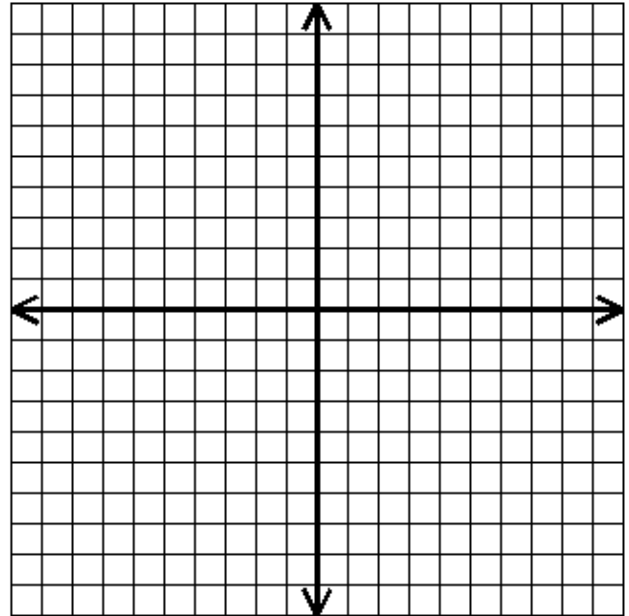


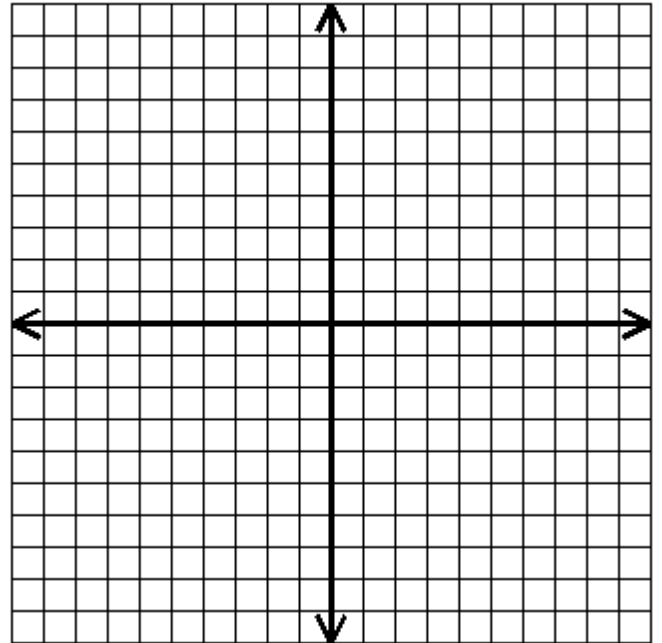
Name _____ Date _____ Period _____

Proving Quadrilaterals

1. Show that quadrilateral $FGHJ$ is a parallelogram using one of the conditions if $F(-4, -2)$, $G(-2, 2)$, $H(4, 3)$, $J(2, -1)$.

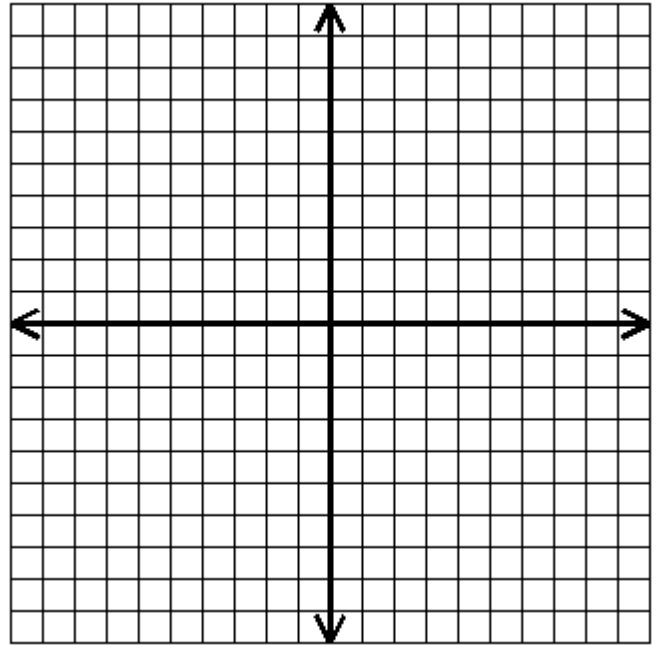


2. Determine whether a parallelogram with the given vertices is a rectangle, rhombus, or square. Give all names that apply.
 $E(-4, -1)$, $F(-3, 2)$, $G(3, 0)$, $H(2, -3)$



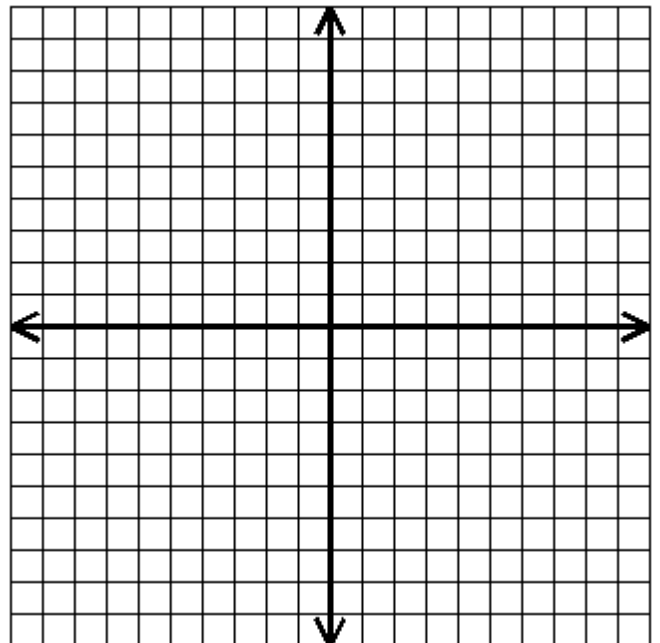
3. **Given:** Quadrilateral $ABCD$ with vertices $A(-2, 2)$, $B(8, -4)$, $C(6, -10)$, and $D(-4, -4)$.

Prove: $ABCD$ is a parallelogram.



4. **Given:** Quadrilateral $ABCD$ has vertices $A(-5, 6)$, $B(6, 6)$, $C(8, -3)$, and $D(-3, -3)$.

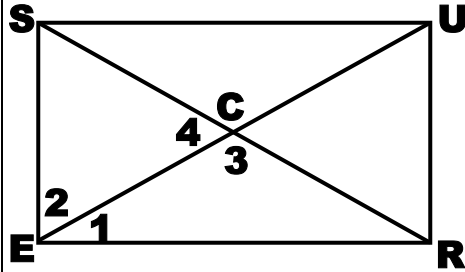
Prove: Quadrilateral $ABCD$ is a parallelogram.
Quadrilateral $ABCD$ is not a rhombus.



Quadrilateral SURE is a rectangle. Use it for 5 – 9.

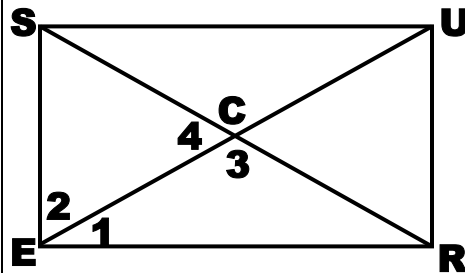
5. _____

$SR = 4v + 2$ and $EU = 6v - 8$. Find SR.



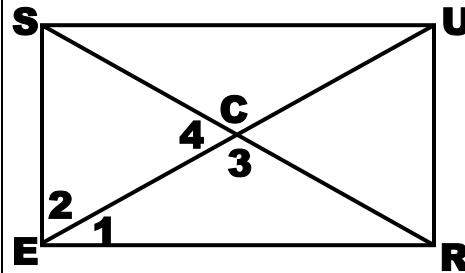
6. _____

$EC = 2w + 3$ and $CU = 3w - 1$. Find EU.



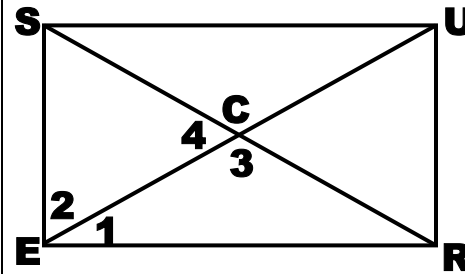
7. _____

$m\angle 1 = x^\circ$ and $m\angle 2 = (2x)^\circ$. Find the value of 'x'.



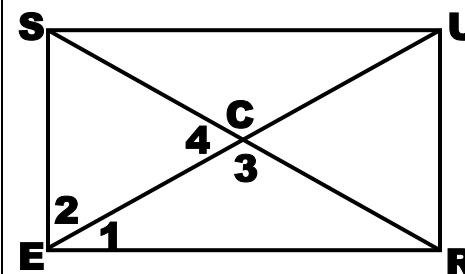
8. _____

$UR = 6y - 7$ and $SE = 4y - 1$. Find SE.



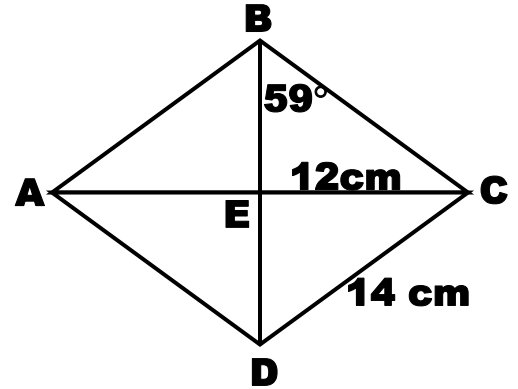
9. _____

$m\angle 4 = (2z)^\circ$ and $m\angle 3 = (8z)^\circ$. Find $m\angle 4$.



Use the rhombus ABCD and the given information to find each measure.

10. _____	Find $m\angle BEC$.
11. _____	Find $m\angle BCE$.
12. _____	Find AC.
13. _____	Find $m\angle ABD$.
14. _____	Find AD.



Use rhombus IJKL and the given information to find each value.

15. $m\angle 1 =$ _____	<p>If $m\angle 3 = 62^\circ$, find $m\angle 1$.</p> <p>A rhombus IJKL is shown with diagonals intersecting at point E. The angles are labeled as follows: $\angle 1$ at vertex I, $\angle 2$ at vertex J, $\angle 3$ at vertex L, $\angle 4$ at vertex K, $\angle 5$ at vertex L, and $\angle 6$ at vertex K.</p>
16. $x =$ _____	<p>If $m\angle 4 = (3x - 1)^\circ$ and $m\angle 3 = (2x + 30)^\circ$, find the value of 'x'.</p> <p>A rhombus IJKL is shown with diagonals intersecting at point E. The angles are labeled as follows: $\angle 1$ at vertex I, $\angle 2$ at vertex J, $\angle 3$ at vertex L, $\angle 4$ at vertex K, $\angle 5$ at vertex L, and $\angle 6$ at vertex K.</p>