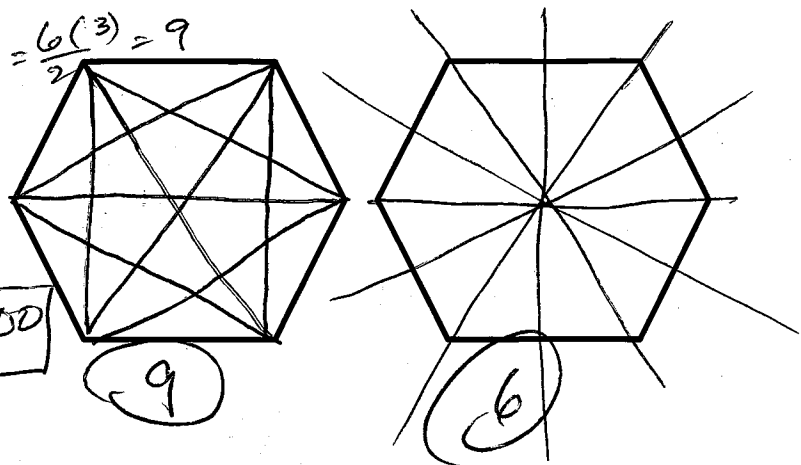


Find all the diagonals of a regular hexagon.

$$\frac{n(n-3)}{2} = \frac{6(3)}{2} = 9$$

Find all the lines of symmetry.

Find all the degrees of rotational symmetry.



$$\frac{360}{6} = 60$$

$\neq 160, 120, 180, 240, 300$
 (60)
 ↑
 smallest one

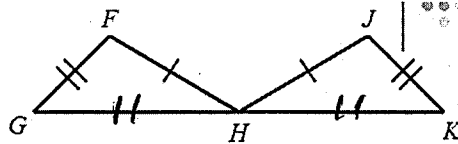
(9)

(6)

Given: H is the midpoint of \overline{GK}

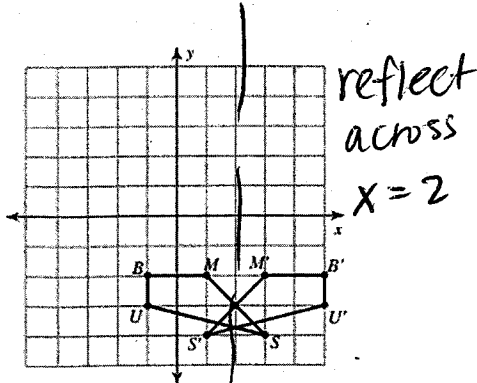
$$\overline{HF} \cong \overline{HJ}, \overline{FG} \cong \overline{JK}$$

Prove: $\triangle FGH \cong \triangle JKH$

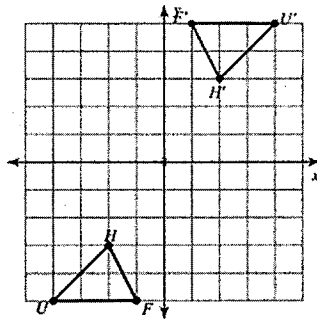


Statements	Reasons
1. H is the midpoint of \overline{GK}	1. given
2. $\overline{GH} \cong \overline{KH}$	2. Def of midpoint
3. $\overline{HF} \cong \overline{HJ}, \overline{FG} \cong \overline{JK}$	3. given
4. $\triangle FGH \cong \triangle JKH$	4. SSS

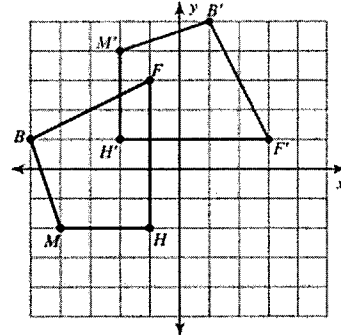
Write a rule for each transformation.



Rotate 180° around $(0,0)$



Rotate 90° counter-clockwise around $(0,0)$



or 270° clockwise

a. Find and draw the line of reflection, that reflects A to B

$$y = 3x - 12$$

b. Find the slope of line AB

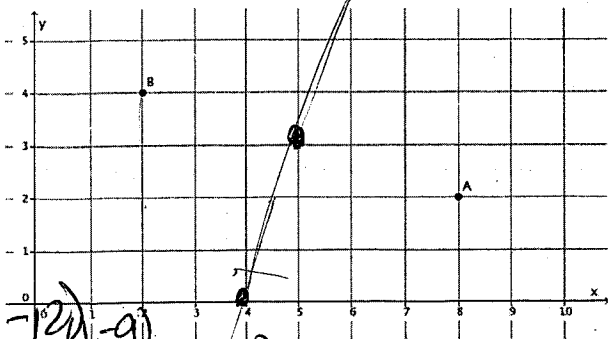
$$-\frac{1}{3}$$

c. Find the perpendicular slope of AB.

$$3$$

d. Find the midpoint of line AB.

$$(5, 3)$$



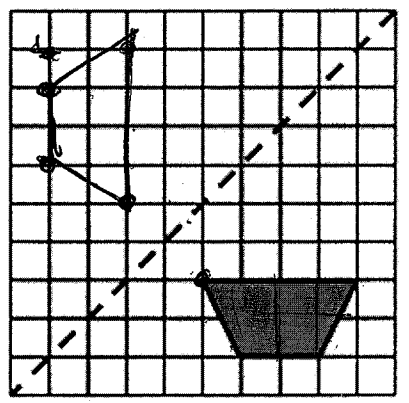
$(0, -12)$
 $(2, -9)$
 $(4, -6)$
 $(6, -3)$
 $(8, 0)$
 $(10, 3)$

Describe how to tell if something is a...

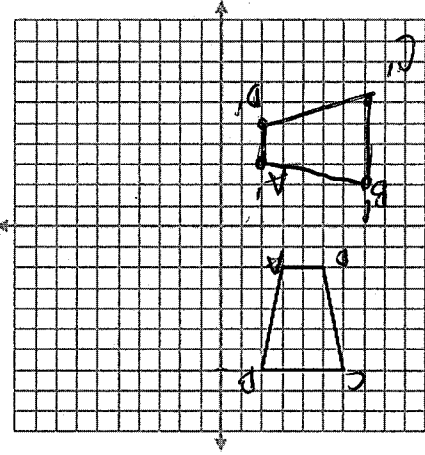
Translation moves left/right or up/down / doesn't change size
 Reflection parallel lines, vertices match up in a line
 Rotation moves in a circular motion around a point

Make your parallelogram family tree, write down the properties.
 opp sides parallel
 opp sides congruent
 diagonals bisect each other
 all 90 angles
 (all 45°)

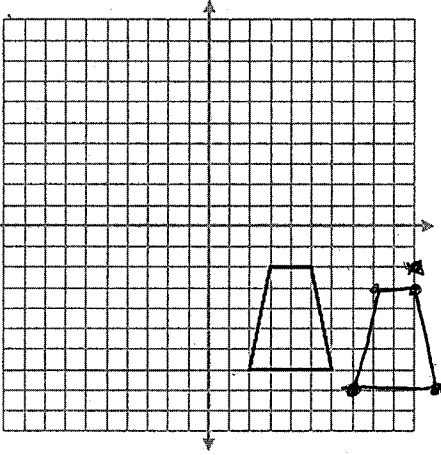
Reflect the trapezoid over the line drawn.



$A'(-2, -3)$ $B'(-7, -2)$
 $C'(-2, -6)$ $D'(-2, -5)$

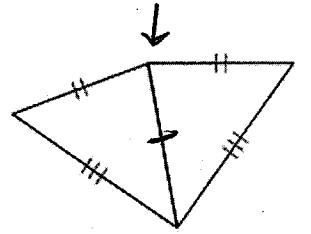


Rotate shape 90 degrees, counter clockwise around the origin.

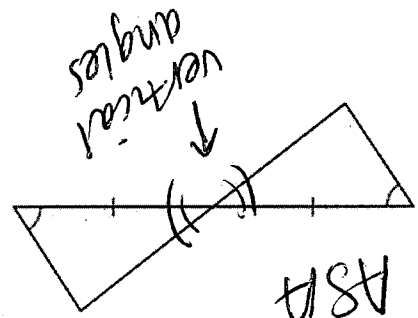


Translate the following shape $(x,y) \rightarrow (x-5, y+1)$

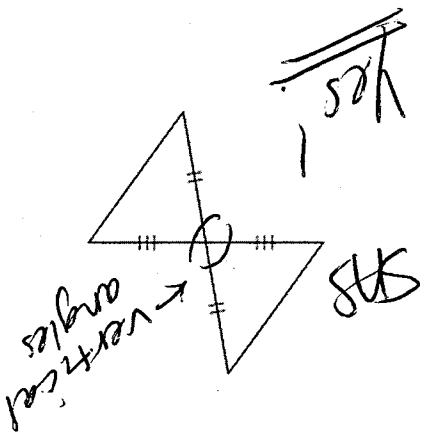
Triangle Congruency - write yes or no and why.



Yes!
 SSS

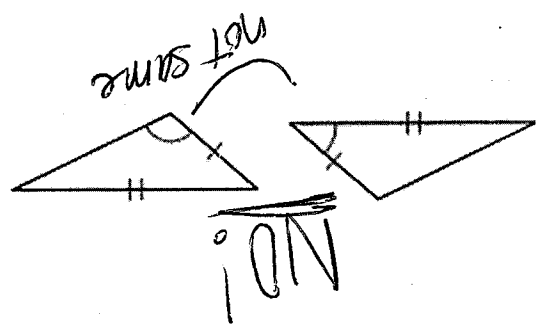


Yes!
 ASA



Yes!
 SAS

reflexive property



What additional information would be needed to prove congruency using ASA?

$\angle DUT \cong \angle SUT$

