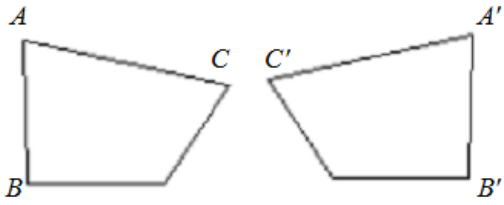


1. Identify the following as a translation, rotation, reflection, or none of these.



Reflection

Oct 24-8:18 AM

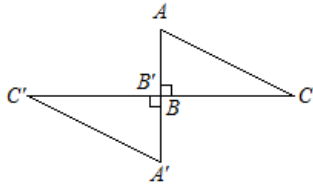
2. An artist is making a sketch for a painting. The sketch measures 16 inches by 4 inches. If the painting will be 175% the size of the sketch, what will be the lengths of the sides of the painting? How does the perimeter of the sketch compare to the perimeter of the painting?

$$1.75 \times 16 = 28$$
$$4 \times 1.75 = 7$$

28 by 7

Oct 24-8:19 AM

3. Identify the following as a translation, rotation, reflection, or none of these.

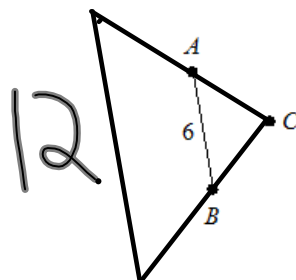


Rotation

Oct 24-8:20 AM

4. In the diagram below, apply a dilation to \overline{AB} using a scale factor of 2 and center C.

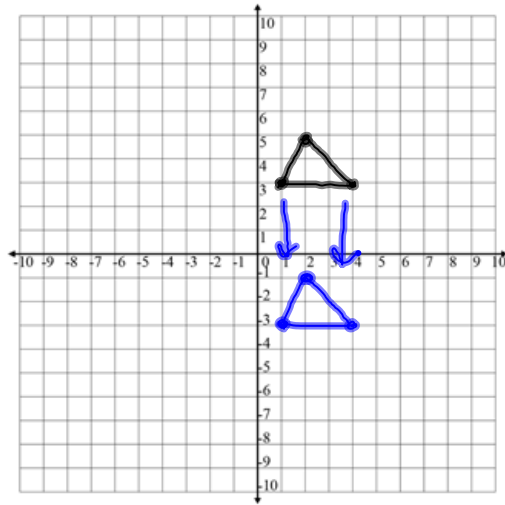
$$6 \times 2 = 12$$



Oct 24-8:20 AM

5. Draw the image of a triangle with vertices $(1, 3)$, $(2, 5)$, and $(4, 3)$. Then perform the following transformation: translate 6 units down .

$$6 \downarrow (x, y - 6)$$



Oct 24-8:21 AM

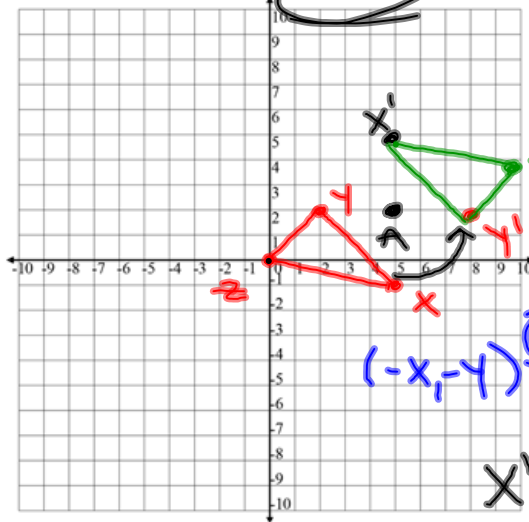
6. What is the mapping notation for a transformation of a reflection T across the y -axis?

$$(x, y) \rightarrow (-x, y)$$

Oct 24-8:21 AM

7. Triangle XYZ has vertices at $X(5, -1)$, $Y(2, 2)$, and $Z(0, 0)$. What would be the coordinates of the image if $\triangle XYZ$ were rotated 180° about the point $A(5, 2)$?

* subtract center
 * apply rule
 * add center



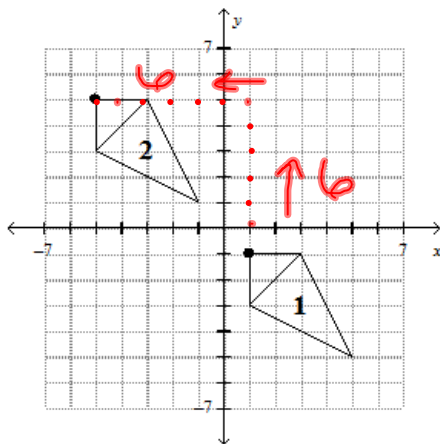
180°

$(x, y) \rightarrow (-x, -y)$

$X(5, -1)$	$Y(2, 2)$	$Z(0, 0)$	
$- (5, 2)$	$- (5, 2)$	$- (5, 2)$	
$(0, -3)$	$(-3, 0)$	$(-5, -2)$	
$(-x, -y)$	$(0, 3)$	$(3, 0)$	$(5, 2)$
	$+ (5, 2)$	$+ (5, 2)$	$+ (5, 2)$
X'	$(5, 5)$	$(8, 2)$	$(10, 4)$

Oct 24-8:21 AM

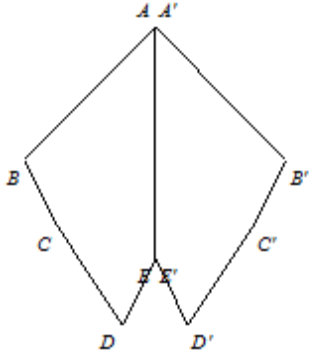
8. An animated film artist creates a simple scene by translating a kite against a still background. Write a rule for the translation of kite 1 to kite 2.



$(x, y) \rightarrow (x - 6, y + 6)$

Oct 24-8:24 AM

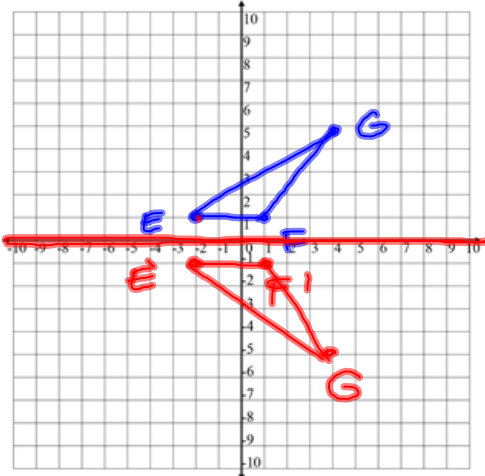
9. Identify the type of transformation illustrated below.



reflection $E \{ \exists$
 translation $E \rightarrow E$
 rotation $E \curvearrowright E$
 dilations $E [$

Oct 24-8:26 AM

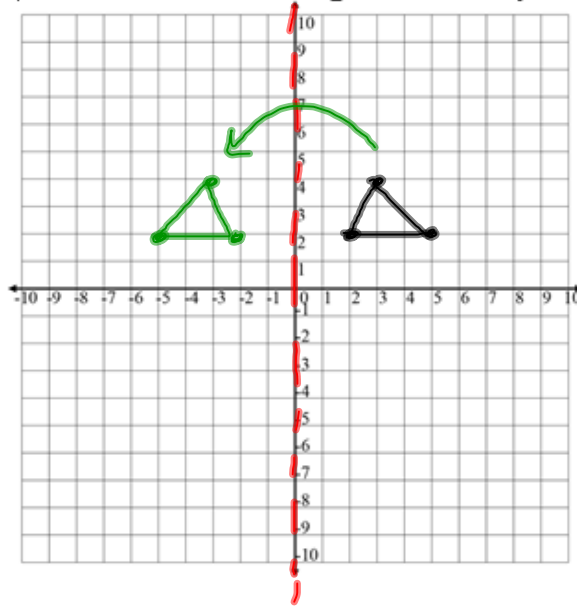
10. Triangle EFG has vertices $E(-3, 1)$, $F(1, 1)$, and $G(4, 5)$. Find the coordinates of the image of point F after a reflection across the x -axis.



$F'(1, -1)$
 $(x, y) \rightarrow (x, -y)$
 $(1, 1) \rightarrow (1, -1)$

Oct 24-8:26 AM

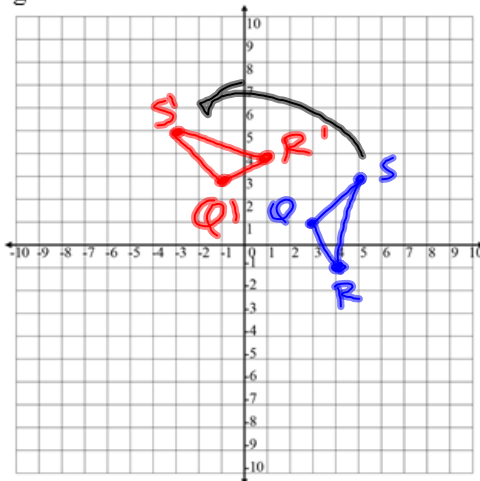
11. Draw the image of a triangle with vertices $(2, 2)$, $(3, 4)$, and $(5, 2)$. Then reflect the triangle across the y -axis.



$$(x, y) \rightarrow (-x, y)$$

Oct 24-8:26 AM

2. $\triangle RSQ$ has vertices $R(4, -1)$, $S(5, 3)$, and $Q(3, 1)$. Graph the triangle and its rotation 90° counterclockwise about the origin.



$$90^\circ \curvearrowleft (-y, x)$$

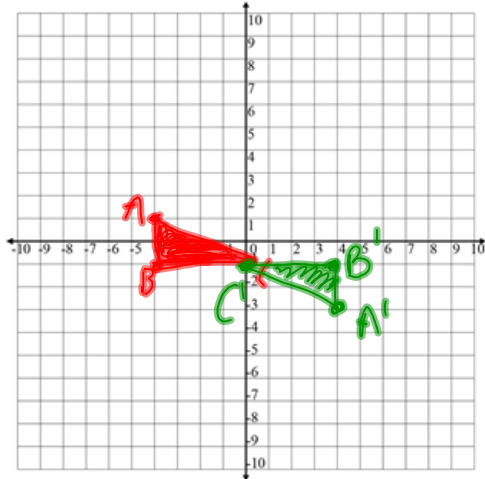
$$R(4, -1) \rightarrow R'(-1, 4)$$

$$S(5, 3) \rightarrow S'(-3, 5)$$

$$Q(3, 1) \rightarrow Q'(-1, 3)$$

Oct 24-8:27 AM

13. Rotate $\triangle ABC$ $A(-4, 1)$, $B(-4, -1)$ and $C(0, -1)$ 180° about vertex C .



Oct 24-8:28 AM

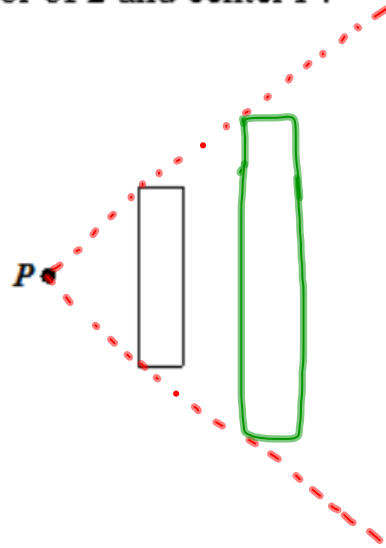
14. A photograph measure 4 inches by 5 inches. If it is enlarged by 200%, what are its new measurements?

$$4 \times 2 = 8 \text{ in}$$

$$5 \times 2 = 10 \text{ in}$$

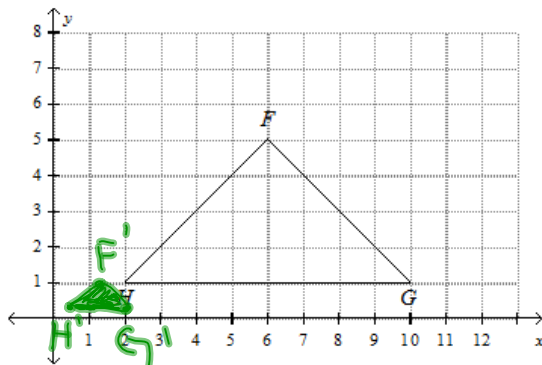
Oct 24-8:29 AM

15. Find the image of the rectangle after a dilation with a scale factor of 2 and center P .



Oct 24-8:29 AM

16. Give the coordinates of the image of the triangle after a dilation centered at the origin and with a scale factor of 0.2.

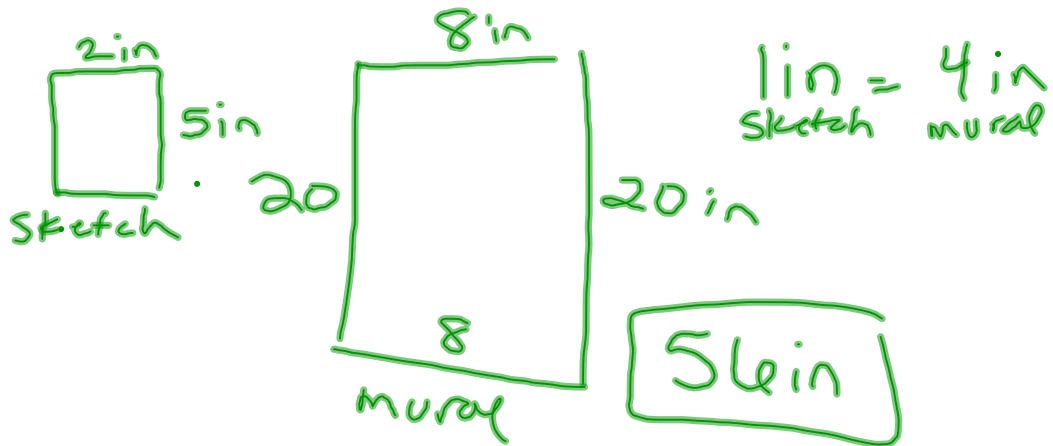


$$\begin{aligned} H(2, 1) \times 0.2 &\rightarrow H'(0.4, 0.2) \\ F(6, 5) \times 0.2 &\rightarrow F'(1.2, 1) \\ G(10, 1) \times 0.2 &\rightarrow G'(2, 0.2) \end{aligned}$$

Oct 24-8:29 AM

7. On a sketch of a mural, 3 inches represents one foot in the mural. A door in the sketch is 2 inches wide by 5 inches high. What is the perimeter of the door in the mural expressed in inches?

$$\frac{12}{3} = 4$$



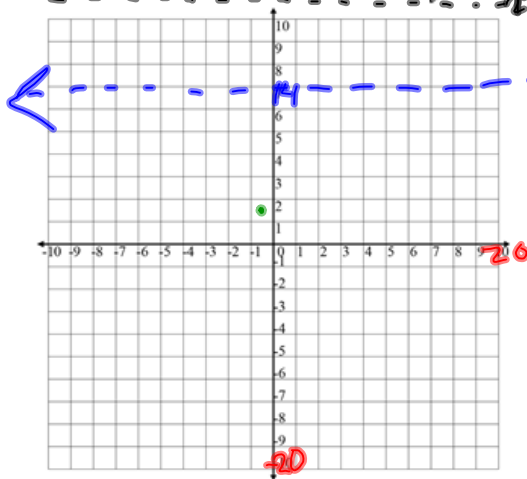
Oct 24-8:29 AM

8. Under a rotation about the origin, the point $(-2, -6)$ is mapped to the point $(2, 6)$. What is the measure, in degrees, of the angle of rotation?

$$180^\circ$$

Oct 24-8:29 AM

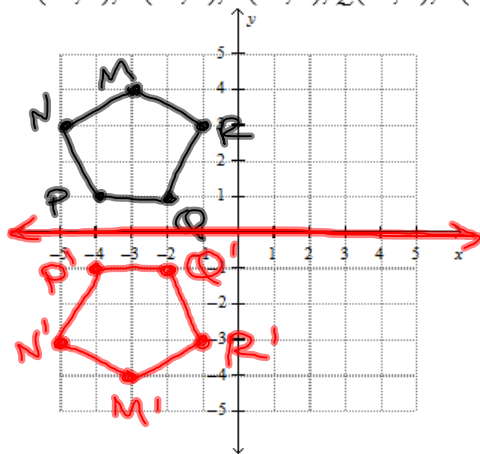
9. Find the coordinates of the image of the point $(-1, 3)$ when it is reflected across the line $y = 14$.



$(-1, 25)$

Oct 24-8:30 AM

0. The following five points form pentagon $MNPQR$.
 $M(-3, 4)$, $N(-5, 3)$, $P(-4, 1)$, $Q(-2, 1)$, $R(-1, 3)$

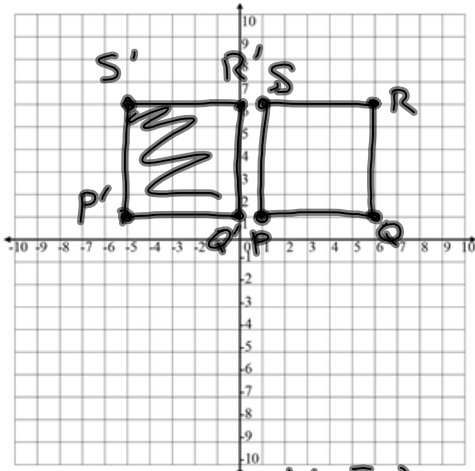


$$(x, y) \rightarrow (x, -y)$$

- Graph the points and draw pentagon $MNPQR$.
- Reflect pentagon $MNPQR$ across the x -axis. Give the coordinates of the vertices of the image.

Oct 24-8:32 AM

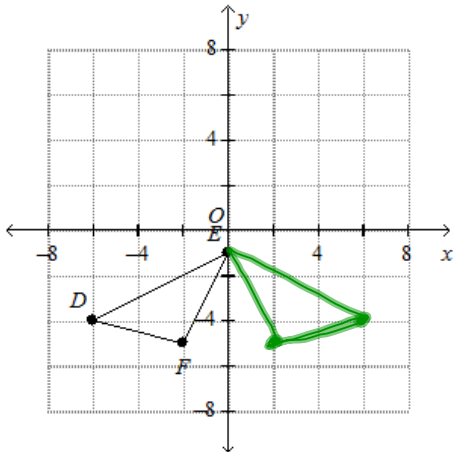
1. A square has vertices $P(1, 1)$, $Q(6, 1)$, $R(6, 6)$, and $S(1, 6)$. It is translated 6 units to the left. What are the coordinates of P' , Q' , R' , and S' ?



$$\begin{aligned} P(1,1) &\rightarrow P'(-5,1) \\ Q(6,1) &\rightarrow Q'(0,1) \\ R(6,6) &\rightarrow R'(-5,6) \\ S(1,6) &\rightarrow S'(0,6) \end{aligned}$$

Oct 24-8:33 AM

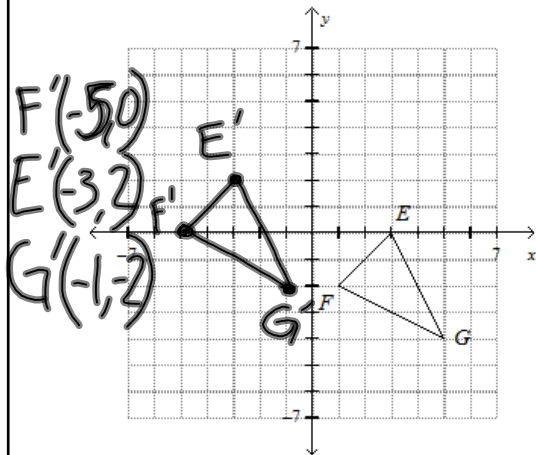
22. In the diagram below, reflect $\triangle DEF$ across the y -axis. Find the coordinates of the vertices of the reflected image and write the transformation in mapping notation.



$$\begin{aligned} E(0,1) &\rightarrow E'(0,1) \\ D(-6,-4) &\rightarrow D'(6,-4) \\ F(-2,-5) &\rightarrow F'(2,-5) \end{aligned}$$

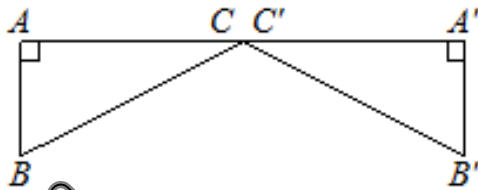
Oct 24-8:33 AM

23. Find the coordinates for the image of $\triangle EFG$ after the translation $(x, y) \rightarrow (x - 6, y + 2)$. Draw the image.



Oct 24-8:33 AM

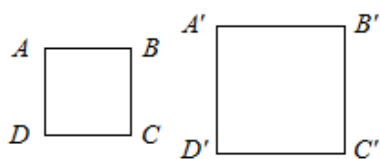
24. Identify the following as a translation, rotation, reflection, or none of these.



reflection

Oct 24-8:33 AM

5. Identify the following as a translation, rotation, reflection, or none of these.



None

Oct 24-8:33 AM

What Taylor would write on indexcard

Reflection Rules

Rotation Rules

*rotation not
at origin

*example ↗

picture of transformations

Dilation Rules

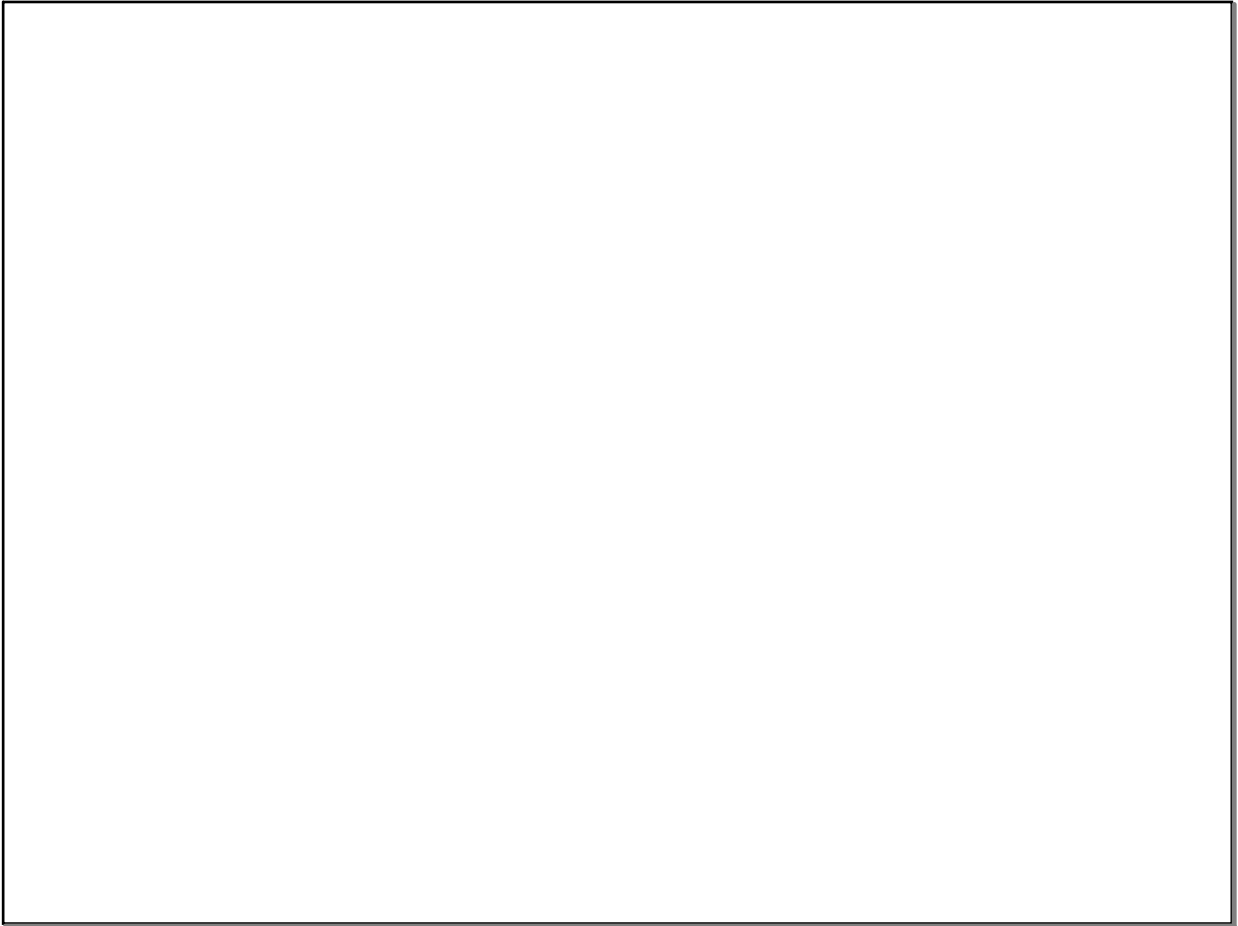
translation directions

Study Guide Q's

*mural

*#7

Oct 25-9:41 AM



Oct 25-3:04 PM