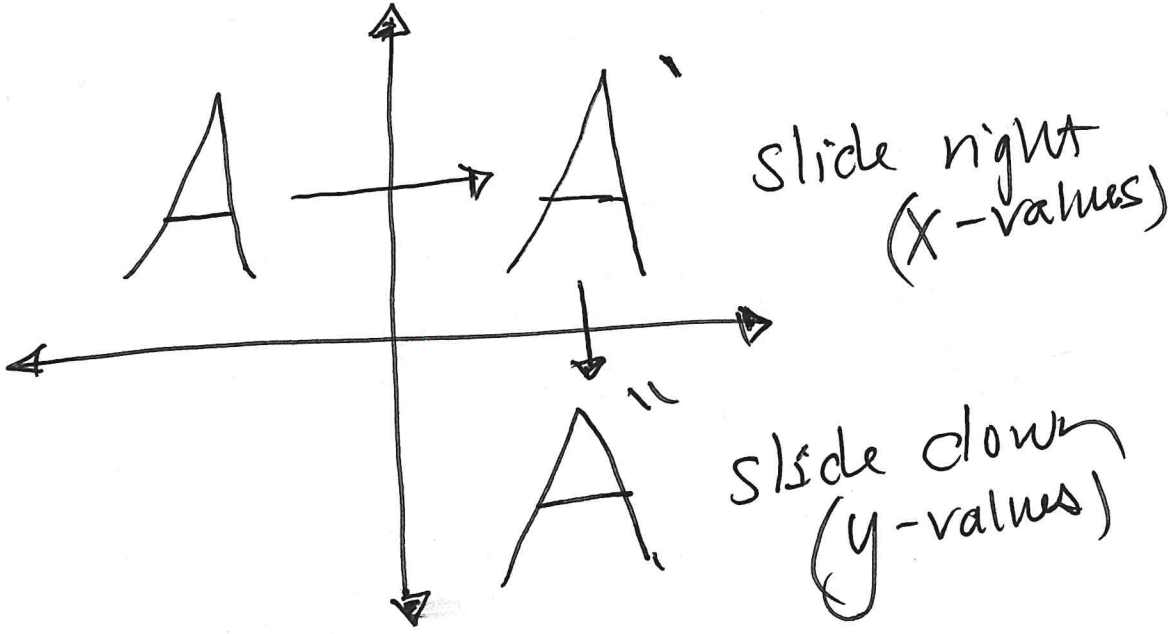


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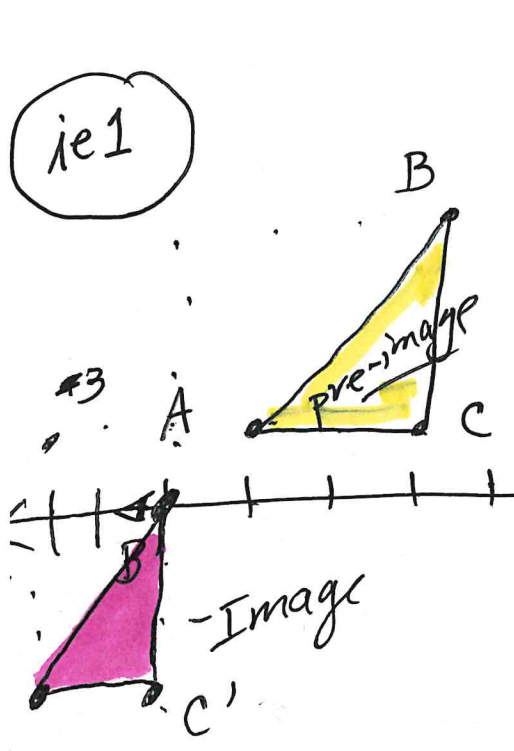
Lesson 14 Translations

Translation: moving a shape up/down and/or left/right.

ex 1



ie 1



ΔABC

A(-4, 1)

B(-2, 4)

C(-2, 1)

Translate $\overset{x\text{-value}}{3}$ left and $\overset{y\text{-value}}{4}$ down

$$A'(-4 \overset{x}{-3}, 1 \overset{y}{-4})$$

$$A'(-7, -3)$$

(x) { Left (subtract)
Right (addition)

(y) { up (addition)
down (subtraction)

$$B'(-2 \textcircled{-3}, 4 \textcircled{-4})$$

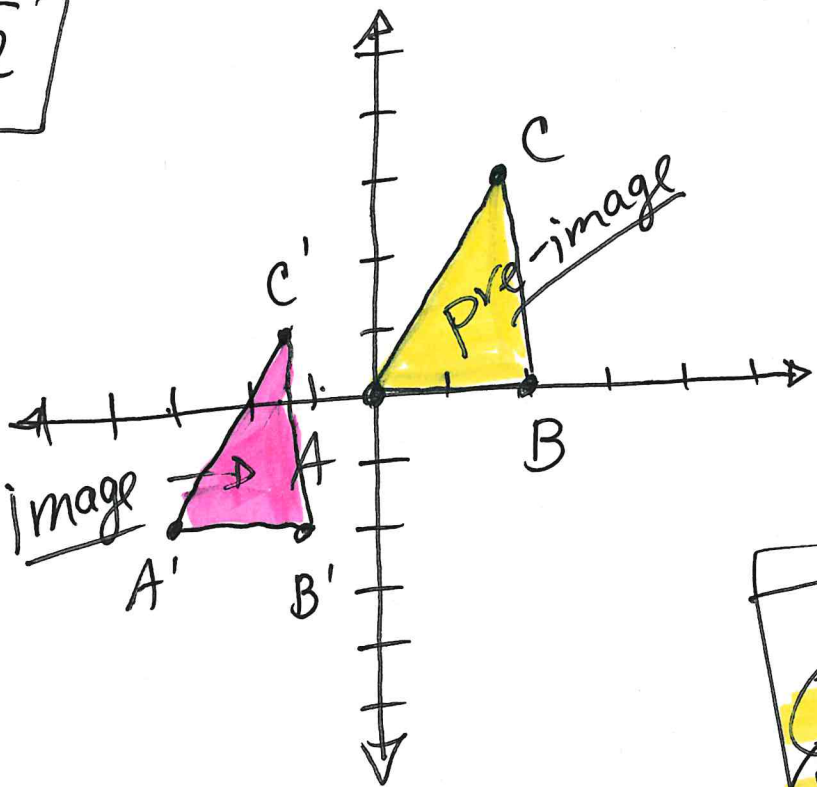
\textcircled{x} \textcircled{y}

$$B'(-5, \textcircled{0})$$

$$C'(-2 \textcircled{-3}, 1 \textcircled{-4})$$

$$C'(-5, -3)$$

ie 2



$A(0,0)$

$B(2,0)$

$C(1.5,3)$

Translate:
 (x) left 3 — negative
 (y) down 2 — negative

$$A' (0 \textcircled{-3}, 0 \textcircled{-2}) = (-3, -2) A'$$

$$B' (2 \textcircled{-3}, 0 \textcircled{-2}) = (-1, -2) B'$$

$$C' (1.5 \textcircled{-3}, 3 \textcircled{-2}) = (-1.5, 1) C'$$

First Last
Hour _____

Lesson 14: HWK
pg. 84 #1-4

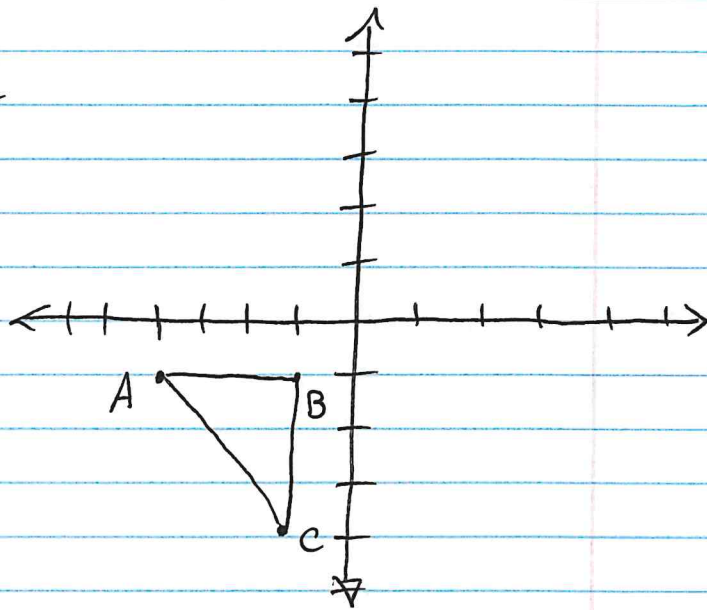
- 1.) Translate the pre-image
4 units right and 2 units up

Given $\triangle ABC$

$$A(-4, -1)$$

$$B(-1, -1)$$

$$C(-1, -4)$$



- 2.) Translate the pre-image 2 units
left and 1 unit down

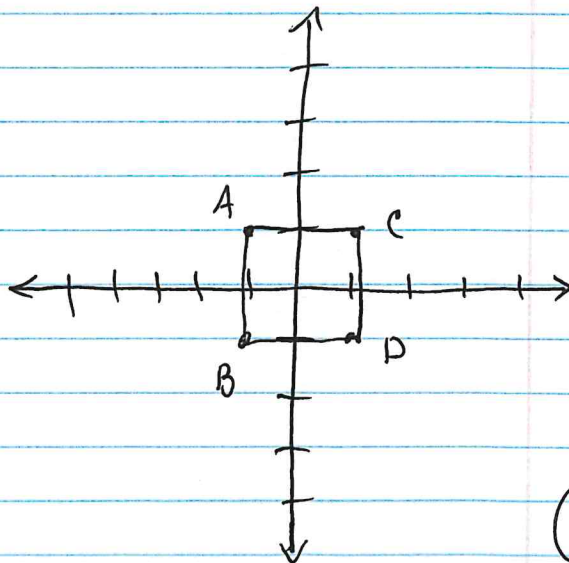
Given $\square ABCD$

$$A(-1, 1)$$

$$B(-1, -1)$$

$$C(1, 1)$$

$$D(1, -1)$$



(1)

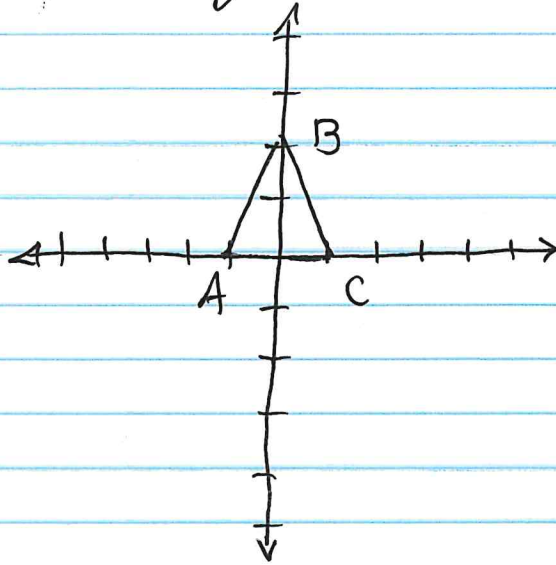
3.) Translate pre-image 2 units up

Given $\triangle ABC$

$A(-1, 0)$

$B(0, 2)$

$C(1, 0)$



4.) Translate pre-image 3 units left

Given $\square ABCD$

$A(1, 1)$

$B(1, 6)$

$C(3, 6)$

~~$A(1, 1)$~~

$D(3, 1)$

