

## 9-2 Translations

### Objectives:

- I can use the correct notation for a translation
- I can identify translations from a graph
- I can graph translations

9-1      HW  
            crossword

9-2      math XL  
9-3      math XL

Computer day

9-4 } math XL  
9-5 }

computer day

test

Translation means:

Moves R or L  
U or D

This is an example of rigid motion

Stays the same shape & size

Notation

translate  $T_{\langle 5, -2 \rangle} (x, y)$

R or L      U or D

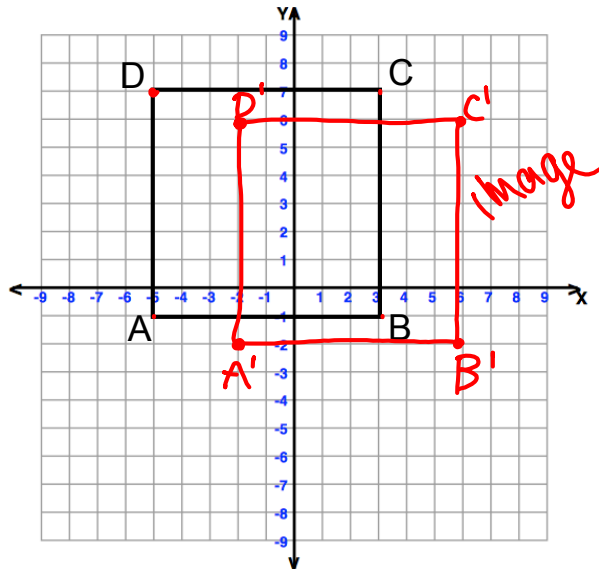
X: + right  
- left

y: + up  
- down

Given ABCD perform the following transformation

$$T_{\langle 3, -1 \rangle}(x, y)$$

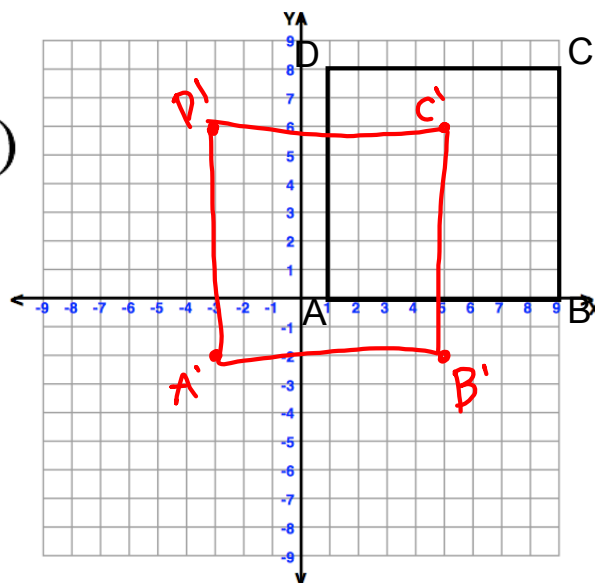
↓ right 3  
 ↓ down 1



Given ABCD perform the following transformation

$$T_{\langle -4, -2 \rangle}(x, y)$$

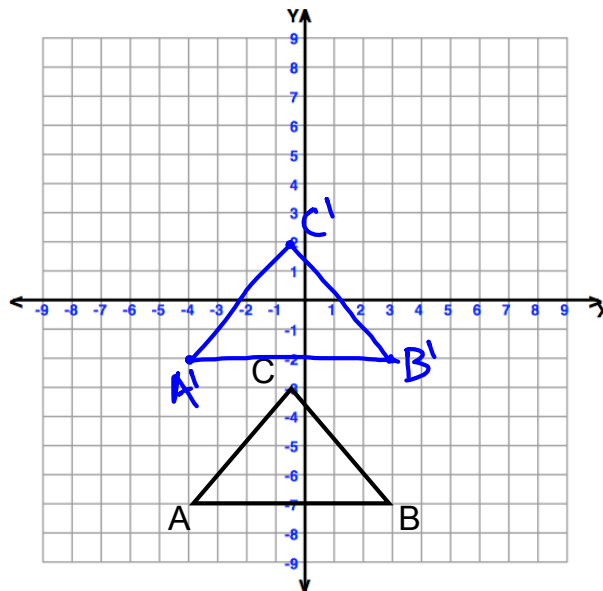
↓ left 4  
 ↓ down 2



Given  $\triangle ABC$  perform the following translation

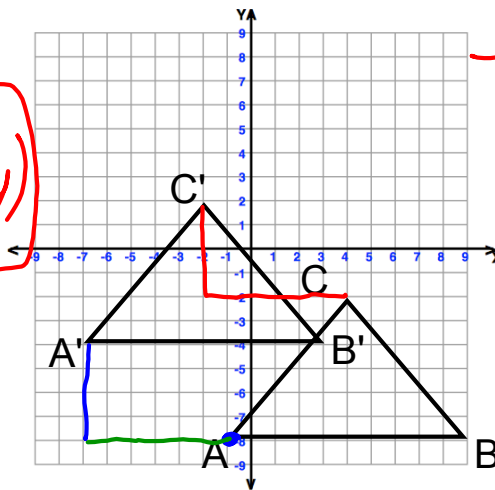
$$T_{\langle 0, 5 \rangle}(x, y)$$

$\downarrow$   $\downarrow$   
 up 5



Given the pre-image  $\triangle ABC$  and the image  $\triangle A'B'C'$  write the translation that was performed

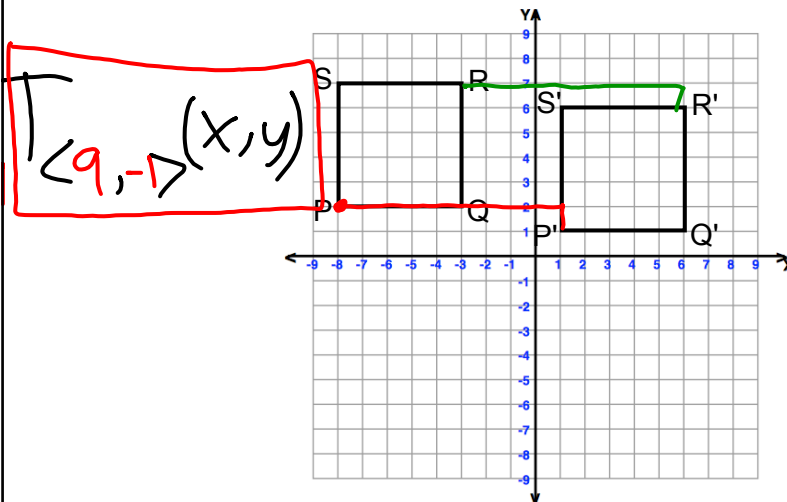
$T_{\langle -6, 4 \rangle}(x, y)$



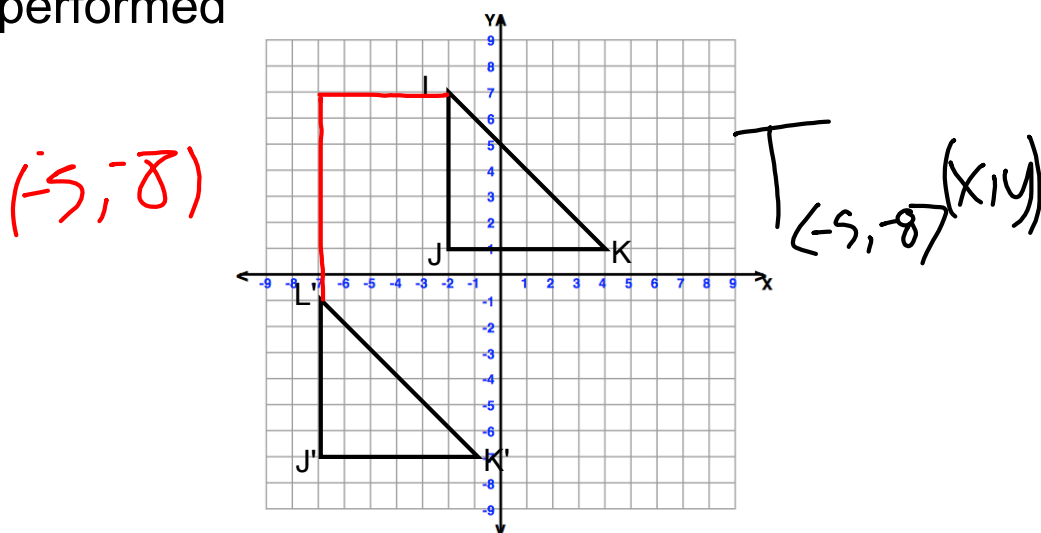
For U or D  
 $\downarrow$   $\downarrow$

$$T_{\langle -6, 4 \rangle}(x, y)$$

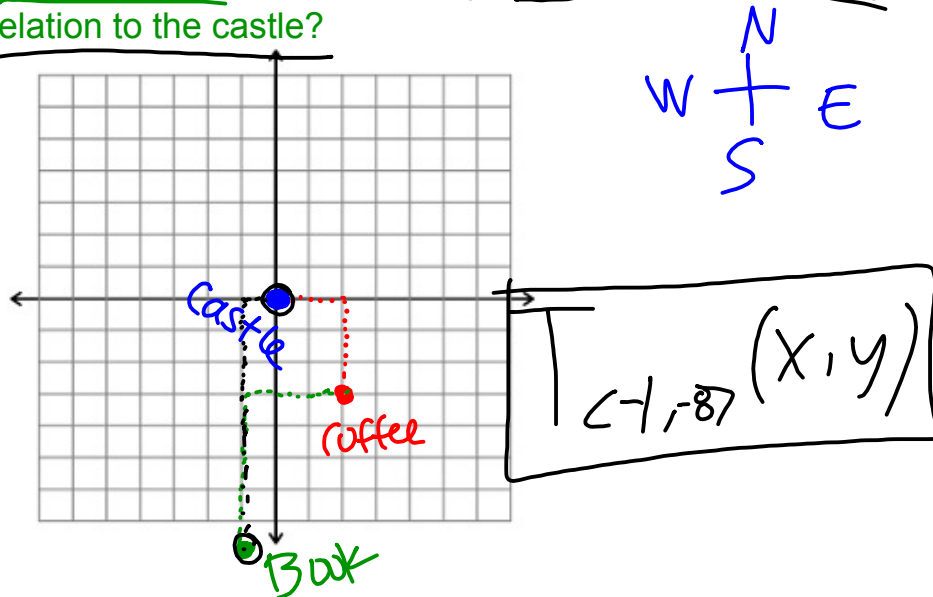
Given the pre-image PQRS and the image P'Q'R'S' write the translation that was performed



Given the pre-image  $\triangle JKL$  and the image  $\triangle J'K'L'$  write the translation that was performed



Harry, Ron, and Hermione are visiting Hogsmeade for the day. From the castle they walk 2 blocks east and 3 blocks south to the coffee shop. Then they walk 3 blocks west and 5 blocks south to the book shop. Where is the book shop in relation to the castle?



Find a translation that has the same effect as the following combined translations

$T_{\langle 3, 4 \rangle}(x, y)$  followed by  $T_{\langle -5, 6 \rangle}(x, y)$

