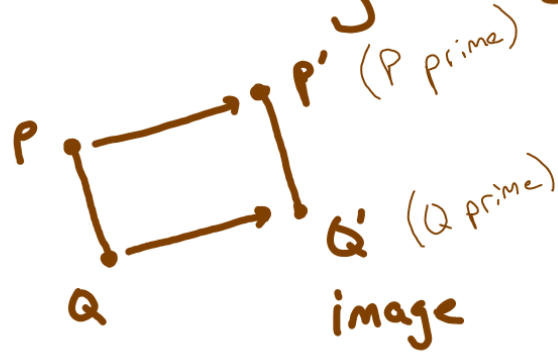


9.1 Translate Figures

* Moving things



pre-image

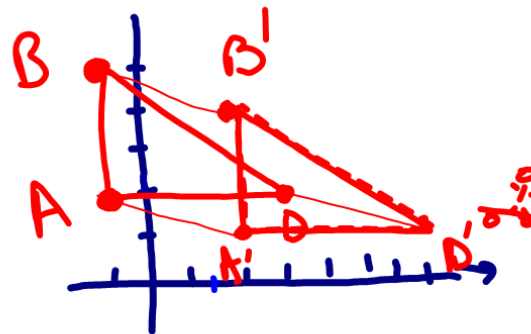
* Translations move things around. Move every point the same distance

Example

$\triangle ABD$ has vertices $A(-1, 2)$, $B(-1, 5)$, $D(4, 2)$.

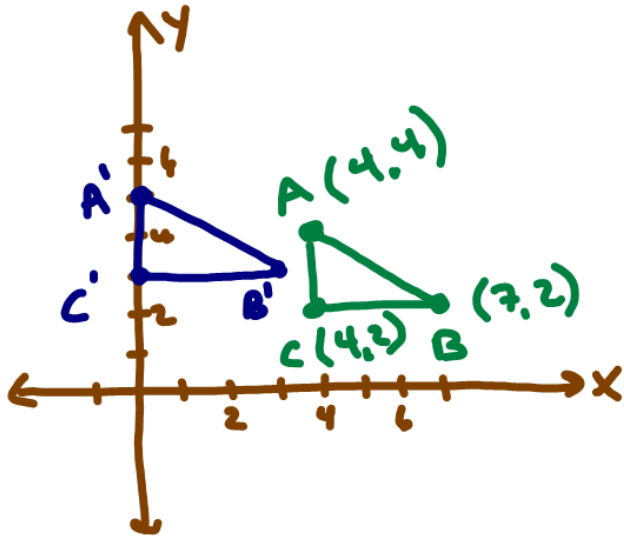
Use $(x, y) \rightarrow (x+3, y-1)$ to move it
Right 3, down 1

$$\begin{aligned}
 A(x, y) &\rightarrow \begin{matrix} -1+3 & 2-1 \\ 2 & 1 \end{matrix} \\
 B(-1, 5) &\rightarrow \begin{matrix} -1+3 & 5-1 \\ 2 & 4 \end{matrix} \\
 D(4, 2) &\rightarrow \begin{matrix} 4+3 & 2-1 \\ 7 & 1 \end{matrix}
 \end{aligned}$$



Example

write the rule. Find length of AB & $A'B'$



$$\triangle ABC \rightarrow \triangle A'B'C'$$

$$(x, y) \rightarrow (x-4, y+1)$$

go left 4,
up 1

*To prove it is a translation, must
check length of all sides