

So far ...

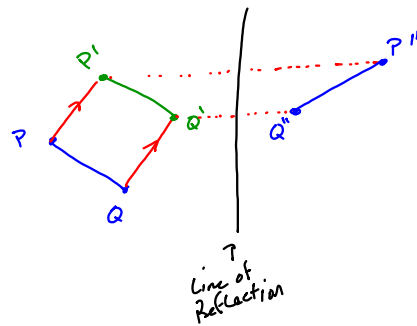
- Reflection (Line of reflection)
- Rotations (point of rotation)
- Translations (notation to describe)
Change

All of these are single events

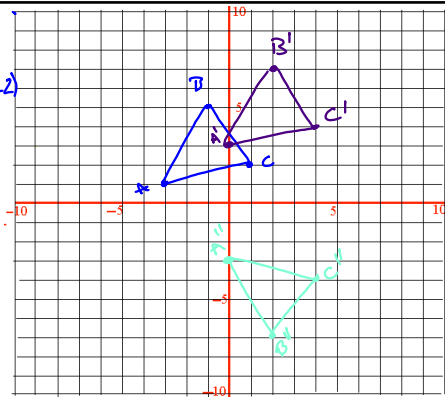
Today we look at
Compound events

2.5 Glide Reflections and Compositions

specific case
Glide Reflection
↓
Translation + Reflection



$\triangle ABC$
 $(x, y) \rightarrow (x+3, y+2)$
Reflected on
the x-axis



Does order make a difference

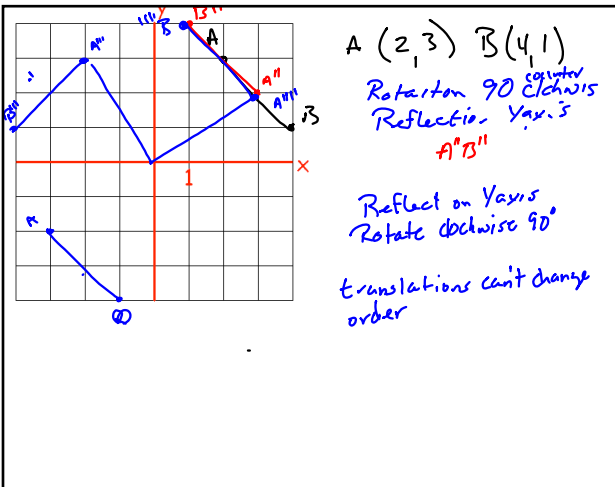
Yes

Is it an isometry

Yes

Given $A(-1, -3)$ $B(-4, -1)$ $C(-6, 4)$
 $(x, y) \rightarrow (x+10, y) \quad \langle -10, 0 \rangle$
 Reflection on the x-axis
 Find A'', B'', C''
 $A''(9, 3)$ $B''(6, 1)$ $C''(4, -4)$

Compositions - a combination
 of two or more transformations
 All compositions are isometries
 No change in shape or size



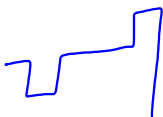
$A(2, 3)$ $B(4, 1)$
 90° counterclockwise rotation
 then Reflection on y axis

Sometimes you get the same
 result.
 Check your work
 In general order is important

Tetris built on composition



Transformations



Short Coordinate
 Review
 of transformations
 including compositions
 Hon 7.5 assignment