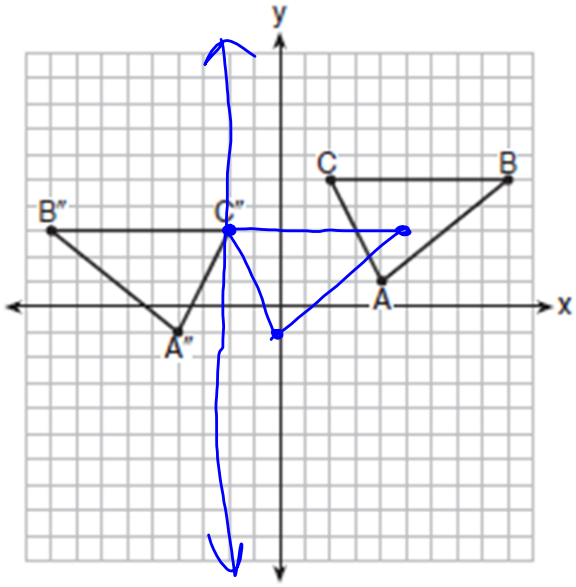
# DO NOW

The graph below shows $\triangle ABC$ and its image, $\triangle A''B''C''$.




$r_{y\text{-axis}}$ followed by $T_{0,-2}$

$T_{-4,-2}$ followed by $r_{x=-2}$

Describe a sequence of rigid motions which would map $\triangle ABC$ onto $\triangle A''B''C''$.

Oct 17-10:02 AM

**Multiple answers possible.**

1. **a)** Describe a series of transformation that will take the triangle labeled **A** onto the triangle labeled **B**.

$r_{y\text{-axis}}$ $T_{0,-6}$

Reflect over y-axis, then translate $(x, y) \rightarrow (x, y-6)$.

OR reverse this order.

down 6

**b)** Describe one transformation that will take the triangle labeled **A** onto the triangle labeled **C**.

Translate $(x, y) \rightarrow (x+2, y-10)$

$T_{2,-10}$

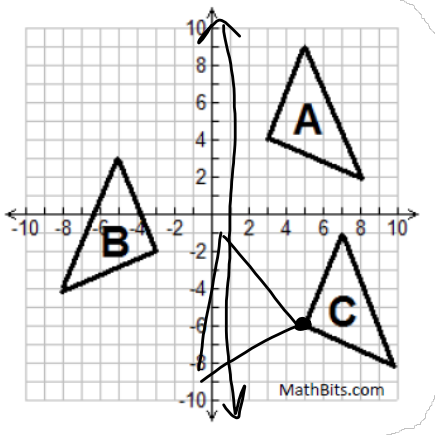
**c)** Describe a series of transformations that will take triangle labeled **B** onto the triangle labeled **C**.

Reflect over y-axis, then translate $(x, y) \rightarrow (x+2, y-4)$.

OR

Translate $(x, y) \rightarrow (x, y-4)$, then reflect over $x = 1$

$T_{0,-4}$




$r_{y\text{-axis}}$ $T_{2,-4}$

Oct 19-10:37 AM

2. a) Describe a series of transformations that will take the trapezoid labeled **G** onto the trapezoid labeled **H**.

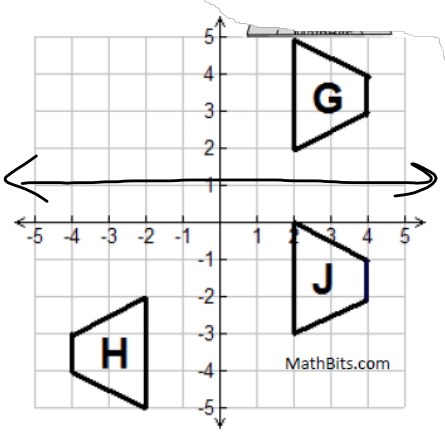
Reflect over $y$-axis and translate $(x, y) \rightarrow (x, y-7)$

b) Describe one transformation that will take the trapezoid labeled **G** onto the trapezoid labeled **H**.

Rotate 180° (counterclockwise).

c) Describe one transformation that will take the trapezoid labeled **G** onto the trapezoid labeled **J**.

Translate $(x, y) \rightarrow (x, y-5)$ or $y = 1$




d) Describe a series of transformations that will take the trapezoid labeled **H** onto the trapezoid labeled **J**. Reflect over $y$-axis and translate $(x, y) \rightarrow (x, y+2)$

Oct 19-10:37 AM

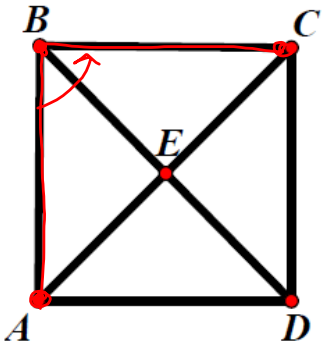
*ABCD* is a square.

a. What is the image of *B* under a 90o rotation counterclockwise about *C*?

D

b. What is the image of *B* under a 180o rotation about E?

D



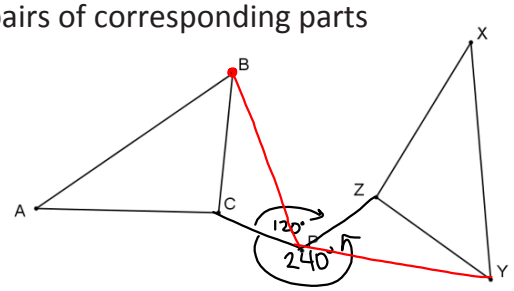

c. Name three different rotations for which the image of *A* is *C*.

$R_{E,180°}$ $R_{D,90°}$ clockwise

$R_{B,90°}$

Oct 17-10:07 AM

In the figure below, the triangle on the left has been mapped to the one on the right by a 240° rotation about point P. $R_{P,240°}$
Write the transformation in function notation, and identify all six pairs of corresponding parts




| Corresponding Vertices | Corresponding Sides |
|---|---|
| $\angle C \cong \angle Z$ | $\overline{AB} \cong \overline{XY}$ |
| $\angle B \cong \angle Y$ | $\overline{BC} \cong \overline{YZ}$ |
| $\angle A \cong \angle X$ | $\overline{AC} \cong \overline{XZ}$ |

Formal Congruence Statement

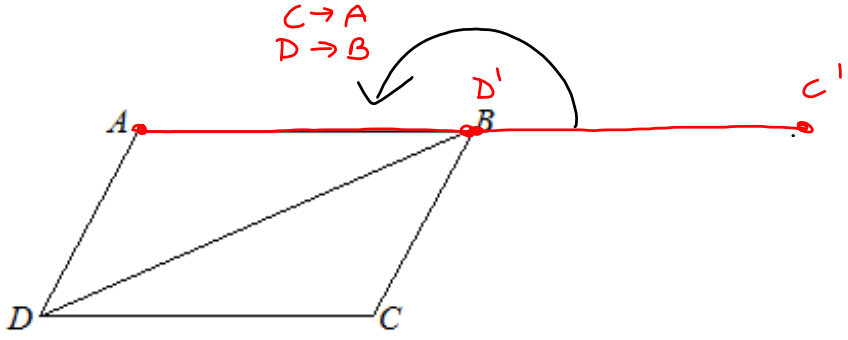
$\triangle ABC \cong \triangle XYZ$

Oct 17-9:33 AM

In the diagram below, $\Delta ABD \cong \Delta CDB$
What rigid motion(s) maps $\overline{CD}$ onto $\overline{AB}$? ~~Find two possible solutions~~.

$A \to C$
$B \to D$
$D \to B$

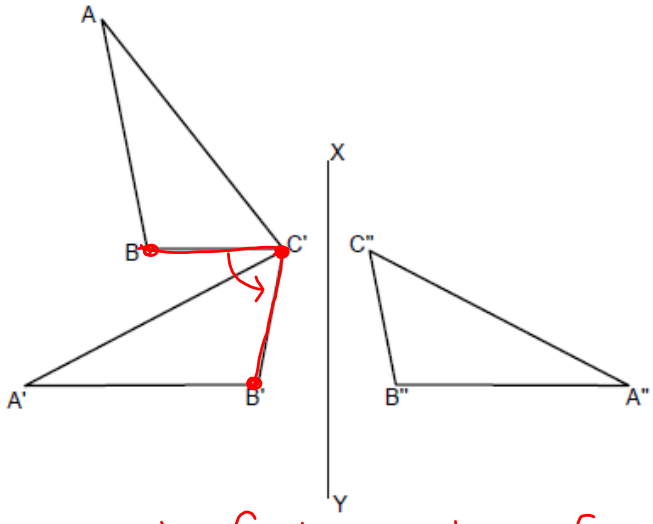
$C \to A$
$D \to B$




Translation along $\overline{BD}$
so $D \to B$.
Then $R_{B,180°}$ (C)

Oct 17-8:31 AM

Describe a sequence of two transformations that would map $\Delta ABC$ to $\Delta A''B''C''$. *Be as specific in your descriptions as possible.*

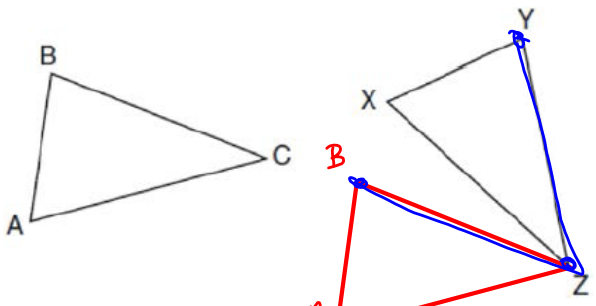



$R_{C,\angle BC'B'}$ followed by $r_{\overline{XY}}$

Oct 18-8:21 AM

Describe a sequence of transformations that would map $\Delta ABC$ to $\Delta XYZ$. Be as specific in your descriptions as possible.

$A \to X$
$B \to Y$
$C \to Z$




Translation so $C \to Z$
followed by
$R_{Z,\angle BZY}$

Oct 18-8:29 AM