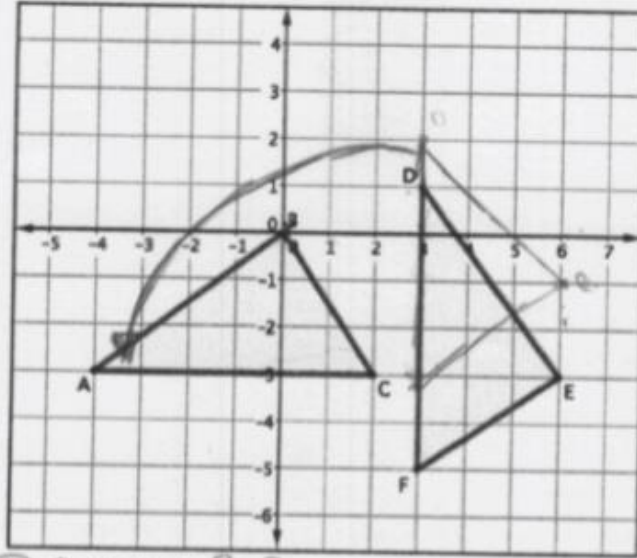


Student #1

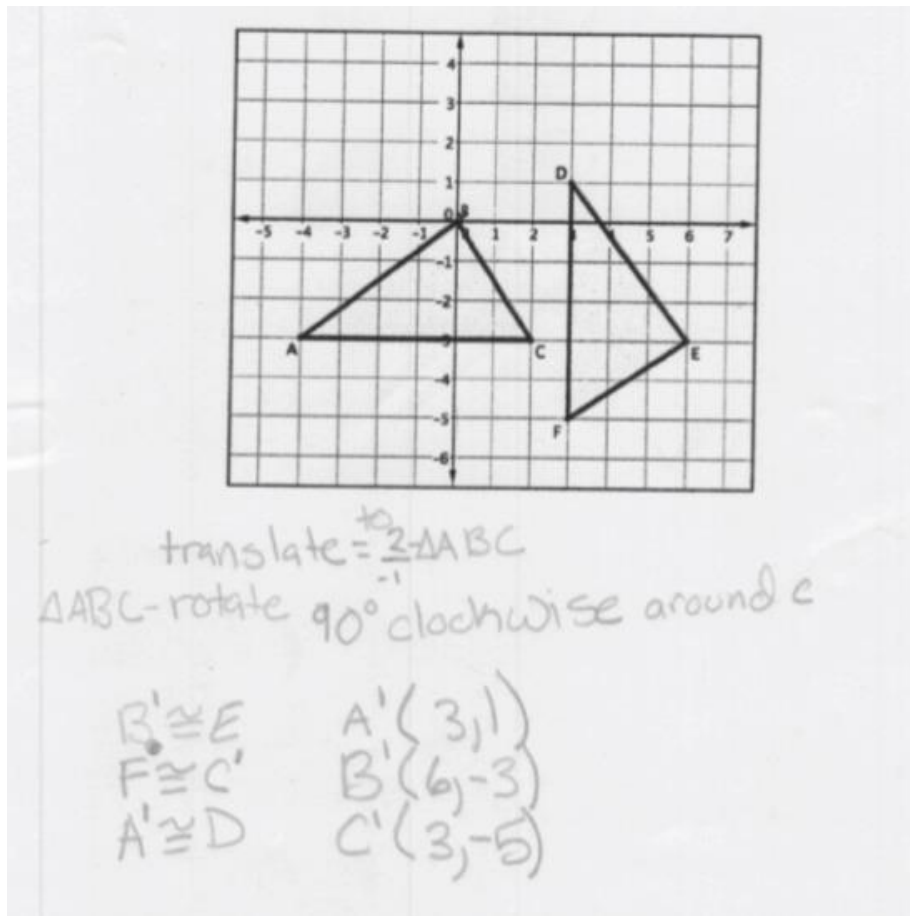


D prime - 3, 2
F prime - 3, -3
E prime - 6, -1

SO rotate by the D point to
the left to make it lie on
the triangle $\triangle ABC$

CPALMS. (2014). Showing Triangles Congruent Using Rigid Motion. Retrieved from <http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64472>

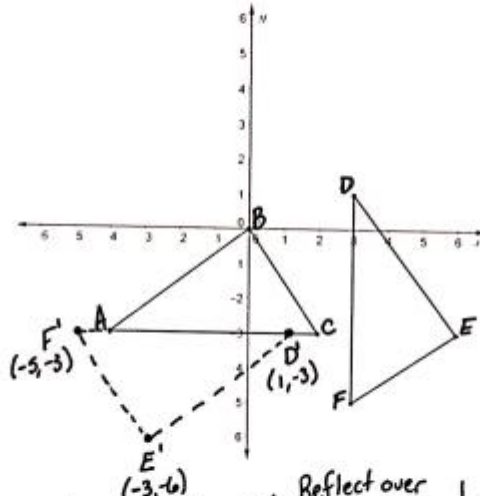
Student #2



CPALMS. (2014). Showing Triangles Congruent Using Rigid Motion. Retrieved from <http://www.cpalms.org/Public/PreviewResourceAssessment/Preview/64472>

Student #3

Given $\triangle ABC$ with vertices $A(-4, -3)$, $B(0, 0)$, $C(2, -3)$ and $\triangle DEF$ with vertices $D(3, 1)$, $E(6, -3)$, $F(3, -5)$, use the definition of congruence in terms of rigid motion to show that $\triangle ABC \cong \triangle DEF$. Describe each rigid motion in terms of coordinates (x, y) .



	$R_{(\text{origin}, -90^\circ)}$	$(x, y) \rightarrow (-x, y)$	Reflect over $y = -3$	$(x, y) \rightarrow (x-3, y)$
D(3, 1)	(1, -3)	(-1, -3)	(-1, -3)	(-4, -3)
E(6, -3)	(-3, -6)	(3, -6)	(3, 0)	(0, 0)
F(3, -5)	(-5, -3)	(5, -3)	(5, -3)	(2, -3)
	1st	2nd	3rd	4th

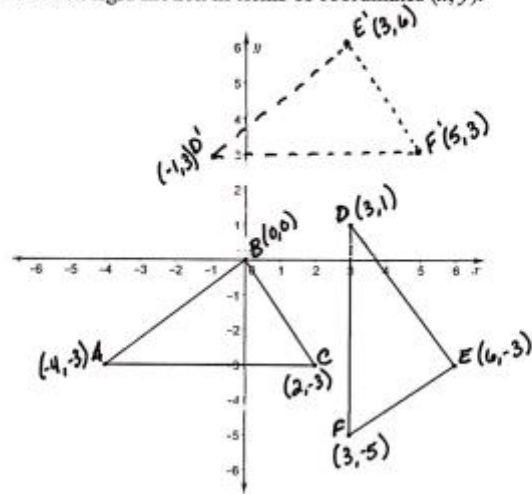
pts. D, E, F
coincide with
pts. A, B, C

$$\begin{array}{l} \sphericalangle A \cong \sphericalangle D \\ \sphericalangle B \cong \sphericalangle E \\ \sphericalangle C \cong \sphericalangle F \end{array} \quad \begin{array}{l} \overline{ED} \cong \overline{AB} \\ \overline{EF} \cong \overline{CB} \\ \overline{DF} \cong \overline{CA} \end{array} \rightarrow \triangle ABC \cong \triangle DEF$$

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Student #4

with vertices $A(-4, -3)$, $B(0, 0)$, $C(2, -3)$ and $\triangle DEF$ with vertices $D(3, 1)$, $E(6, -3)$, $F(3, -5)$, use the definition of congruence in terms of rigid motion to show that $\triangle ABC \cong \triangle DEF$. Describe each rigid motion in terms of coordinates (x, y) .



- Rotate $\triangle DEF$ 90° counter-clockwise around the origin.
- Translate $\triangle D'E'F'$ down 6 units and left 3 units
- After doing these transformations the result is $\triangle ABC$.

$$\triangle ABC \cong \triangle DEF$$

$$\begin{array}{l} \hookrightarrow \angle A \cong \angle D \quad \overline{AB} \cong \overline{DE} \\ \angle B \cong \angle E \quad \overline{BC} \cong \overline{EF} \\ \angle C \cong \angle F \quad \overline{AC} \cong \overline{DF} \end{array}$$