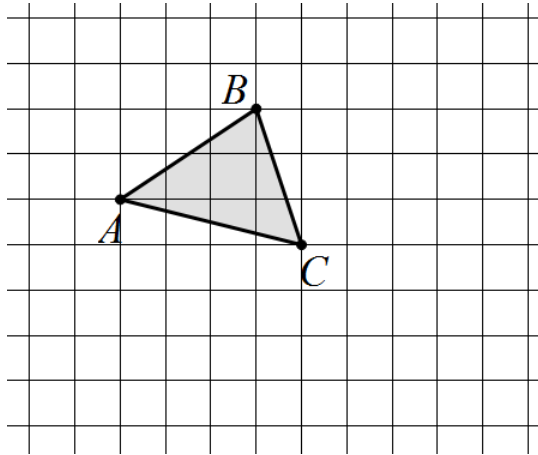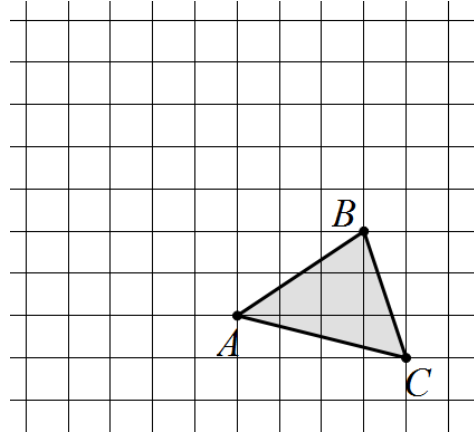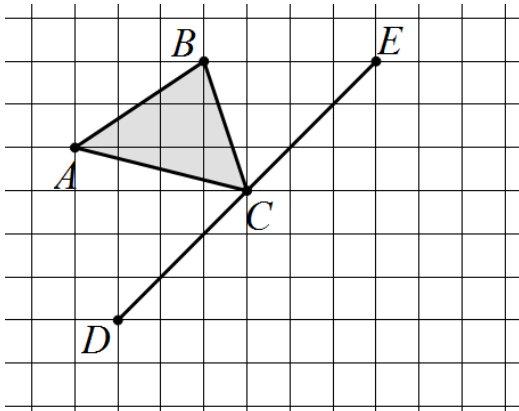1. Graph & label the image of $\triangle ABC$ under $R_{C,90^0}$.

2. Graph & label the image of $\triangle ABC$ under $D_{C,2}$.

3. Graph & label the image of $\triangle ABC$ under $T_{\overline{CD}} \circ r_{\overline{DE}}$.

4. Which of the transformations in numbers 1 through 3 are Rigid Motions? Explain your reasoning.

5.

a. Is $\triangle ABC$, from question 1, Isosceles? **Justify** your reasoning.

b. Is $\triangle ABC$, from question 1, a Right Triangle? **Justify** your reasoning.

6. Write the converse, inverse and contrapositive of the conditional:

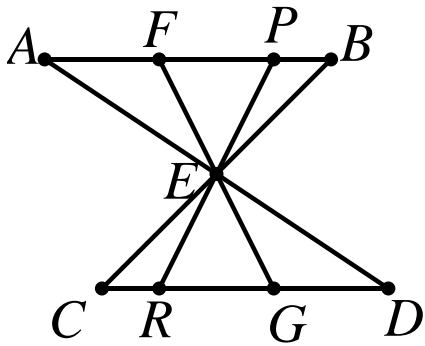*If 2 angles are vertical, then they are congruent.*

Converse: _____

Inverse: _____

Contrapositive: _____

7. Which statement in number 8 is logically equivalent to the original, given conditional? Explain.

8. Complete the two – Column proof:

		Statements	Reasons

Given: $\overline{AB} \cong \overline{DC}$
$\overline{FP} \cong \overline{GR}$
$\overline{BP} \cong \overline{CR}$

Prove: $\overline{AF} \cong \overline{DG}$