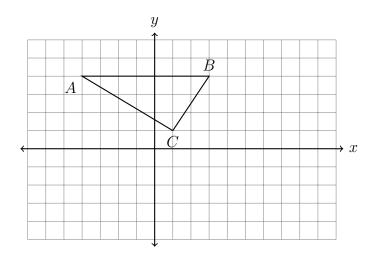
24 February 2020

9.1 Do Now: Transformations and corresponding parts

1. Translate $\triangle ABC$ by $(x,y) \rightarrow (x+3,y-5)$. Label the image $\triangle A'B'C'$.



2. What transformation maps $\triangle ABC$ onto $\triangle DEC$, shown below? Fully specify the transformation. Complete the table of mappings to corresponding objects.

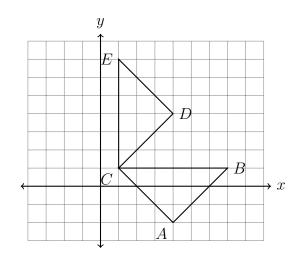




(c)
$$C \rightarrow$$

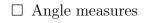
(d)
$$\angle ACB \cong \underline{\hspace{1cm}}$$

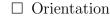
(e)
$$\underline{\hspace{1cm}} \cong \overline{DE}$$



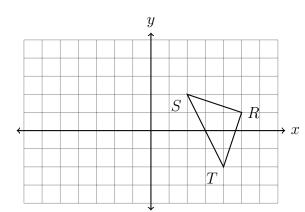
3. Reflect $\triangle TRS$ across the y-axis, labeling the image $\triangle T'R'S'$. Check those properties that are maintained by reflection.



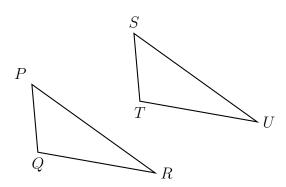




$$\square$$
 Area



4. A translation maps triangle PQR onto triangle STU.



Write each corresponding object.

- (a) $Q \rightarrow \underline{\hspace{1cm}}$
- (b) $\angle QRP \cong \underline{\hspace{1cm}}$
- (c) $\cong \overline{ST}$
- (d) Justify $\triangle PQR \cong \triangle STU$. Use the words "rigid motion".
- 5. Check those transformations that are rigid motions.
 - □ Dilation
 - \square Translation
 - □ Reflection
 - □ Rotation
 - ☐ An isometry
 - ☐ Horizontal stretch
- 6. A rigid motion maps $\triangle DEF$ onto $\triangle LMN$. Fill in the blanks.

The following is given:

(a) $D \rightarrow \underline{\hspace{1cm}}$

$$DE = 10$$

$$m\angle E = 40^{\circ}$$

$$m \angle F = 110^{\circ}$$

- (b) LM =_____
- (c) $m \angle M =$ _____
- (d) $\overline{LM} \cong \underline{\hspace{1cm}}$
- 7. Given $\triangle JKL \sim \triangle MNO$. $m\angle K = 40^{\circ}$ and $m\angle M = 100^{\circ}$. Find the measure of $\angle J$.