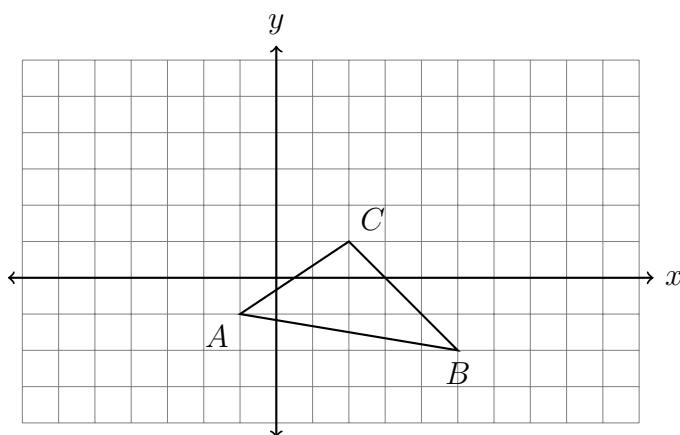


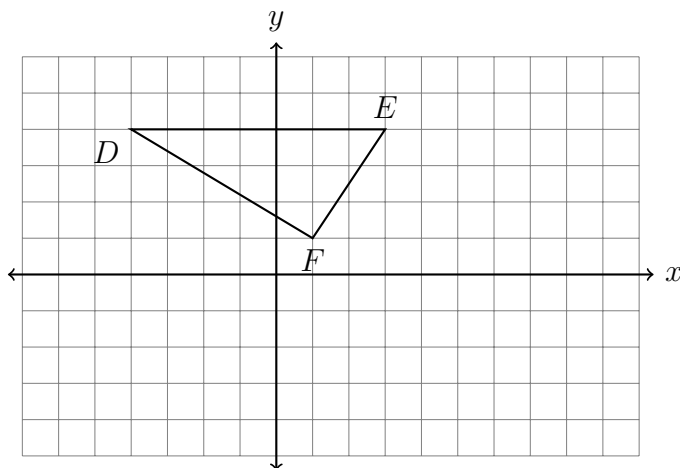
24 February 2020

**9.1b Do Now: Transformations and corresponding parts**

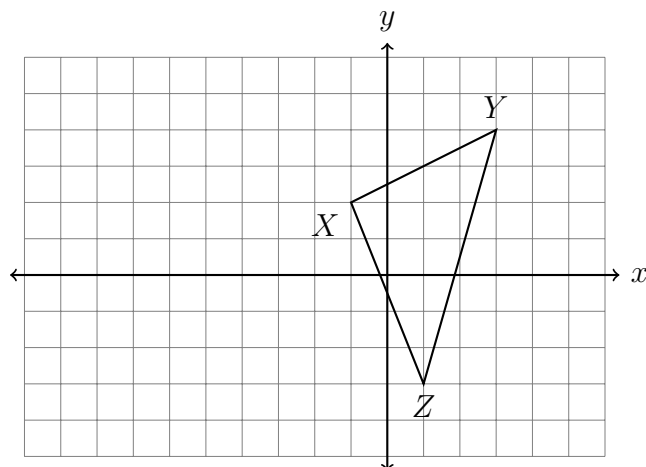
1. Slide  $\triangle ABC$  to the right three and up four. Label the image  $\triangle A'B'C'$ .



2. Translate  $\triangle DEF$  by  $(x, y) \rightarrow (x + 3, y - 5)$ . Label the image  $\triangle D'E'F'$ .



3. Plot and label  $\triangle XYZ$  with  $X(-1, 2)$ ,  $Y(3, 4)$ , and  $Z(1, -3)$ . Then translate by  $(x, y) \rightarrow (x - 6, y - 1)$ , labeling the image  $\triangle X'Y'Z'$ .



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

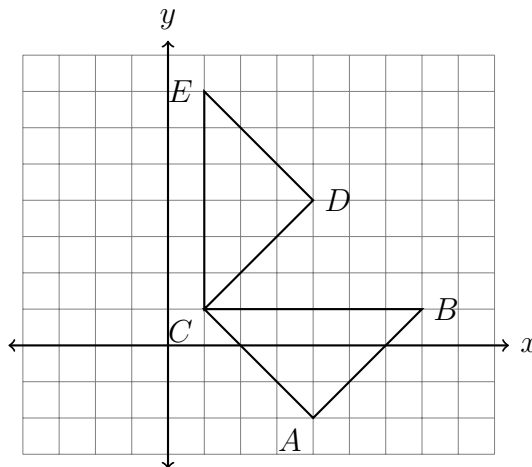
(a)  $A \rightarrow$  \_\_\_\_\_

(b)  $B \rightarrow$  \_\_\_\_\_

(c)  $C \rightarrow$  \_\_\_\_\_

(d)  $\angle ACB \cong$  \_\_\_\_\_

(e) \_\_\_\_\_  $\cong \overline{DE}$



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

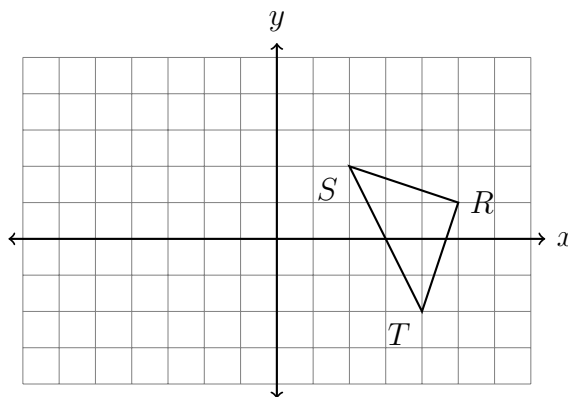
☐ Length

☐ Angle measures

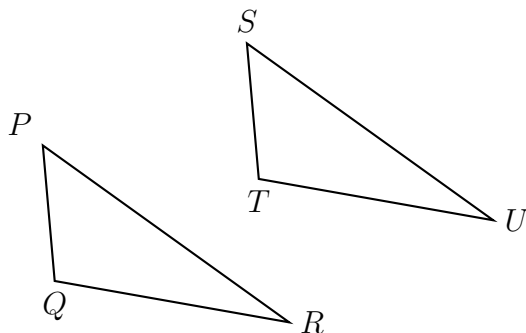
☐ Orientation

☐ Parallel relationships

☐ Area



6. A translation maps triangle  $PQR$  onto triangle  $STU$ .



Write each corresponding object.

(a)  $Q \rightarrow$  \_\_\_\_\_

(b)  $\angle QRP \cong$  \_\_\_\_\_

(c) \_\_\_\_\_  $\cong \overline{ST}$

(d) Justify  $\triangle PQR \cong \triangle STU$ . Use the words “rigid motion”.

7. Check those transformations that are rigid motions.

- ☐ Dilation
- ☐ Translation
- ☐ Reflection
- ☐ Rotation
- ☐ An isometry
- ☐ Horizontal stretch

8. A rigid motion maps  $\triangle DEF$  onto  $\triangle LMN$ . Fill in the blanks.

The following is given:

$$DE = 10$$

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

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

(a)  $D \rightarrow$  \_\_\_\_\_

(b)  $LM =$  \_\_\_\_\_

(c)  $m\angle M =$  \_\_\_\_\_

(d)  $\overline{LM} \cong$  \_\_\_\_\_

9. Given  $\triangle JKL \sim \triangle MNO$ .  $m\angle K = 40^\circ$  and  $m\angle M = 100^\circ$ .  
Find the measure of  $\angle J$ .