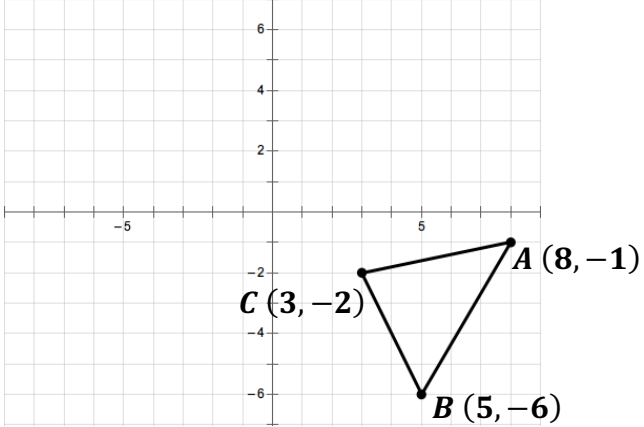


T.1: Translation

1) What are the similarities and differences between Jaxon and Maxine's methods?

Similarities	Differences

2) Use Jaxon and Maxine's methods to translate $\triangle ABC$ 10 units left and 7 units up.

<p>Jaxon's Method Draw and label the coordinates of your translated figure.</p>	<p>Maxine's Method Show your work in the space provided below.</p>
	<p>$A(8, -1)$ $B(5, -6)$ $C(3, -2)$</p>

3) Are their translated triangles and their original triangles the same size and shape? Explain your answer.

4) What happens to the coordinates of a figure when it is moved:

a) to the left?

b) to the right?

c) down?

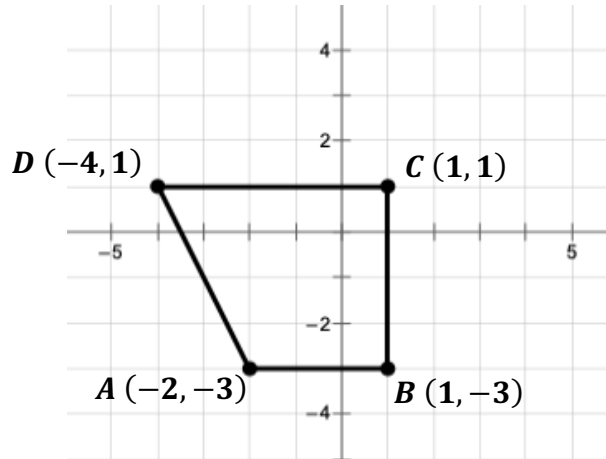
d) up?

T.2: Reflection

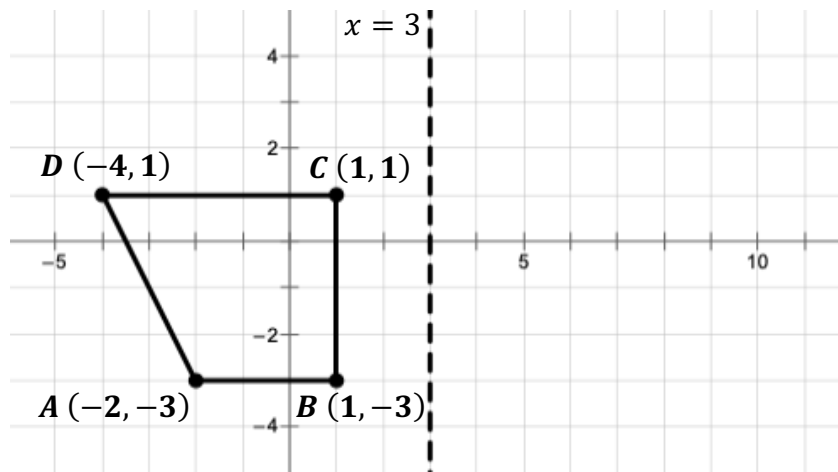
1) What are the similarities and differences between Jaxon and Maxine's methods?

Similarities	Differences

2) Reflect trapezoid $ABCD$ over the x-axis. Draw and label the coordinates of your reflected figure.



3) Reflect trapezoid $ABCD$ over the line $x = 3$. Draw and label the coordinates of your reflected figure.



4) Explain what happens to the coordinates of a figure when you reflect it over:

a) the x-axis?

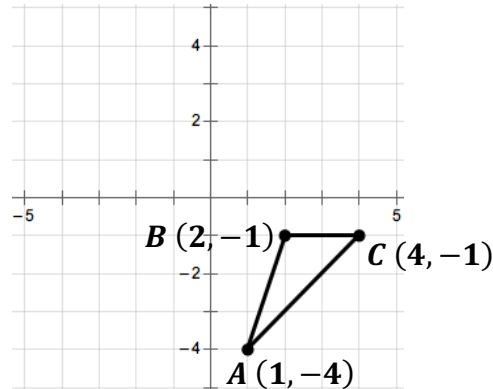
b) the y-axis?

T.3: Rotation

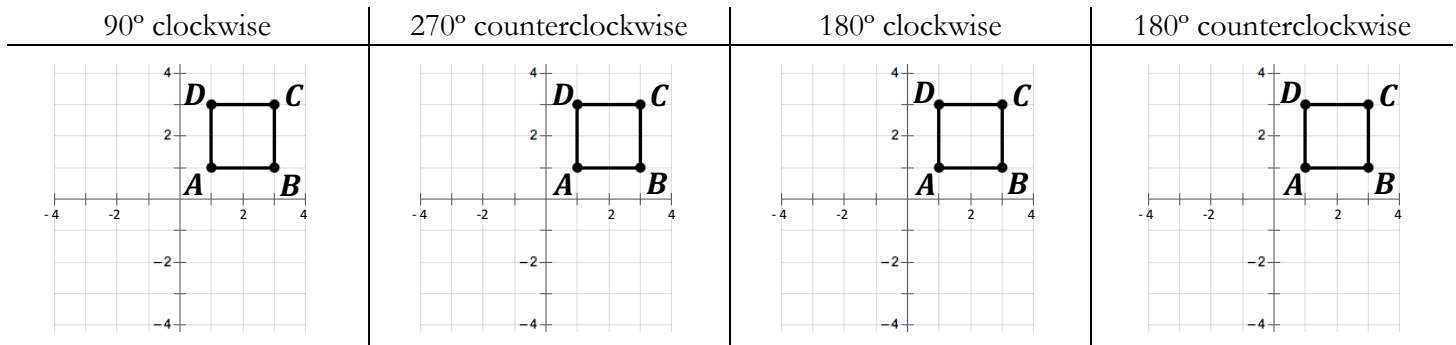
1) What are the similarities and differences between Jaxon and Maxine's methods?

Similarities	Differences

2) Using Jaxon or Maxine's method, rotate $\triangle ABC$ 180° counterclockwise. Draw and label the coordinates of your rotated figure.



3) a) For each of the rotations listed below, sketch and label the rotated figure.



b) Which of the rotations above land in the same place?

4) a) Given point $(2, -3)$, what are the coordinates if it is rotated 90° clockwise?

b) Given point (J, K) , what are the coordinates if it is rotated 90° clockwise?

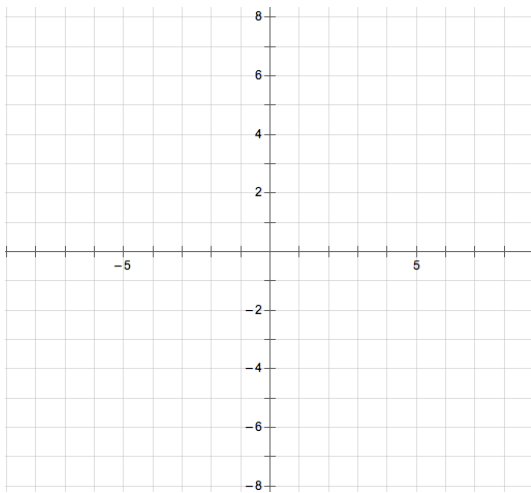
T.4: Dilation

1) What are the similarities and differences between Jaxon and Maxine's methods?

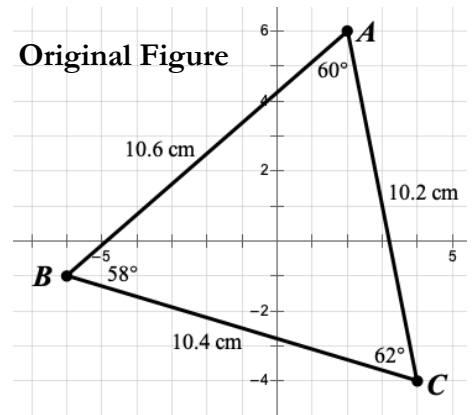
Similarities	Differences

2) Who do you think dilated the figure correctly? Explain.

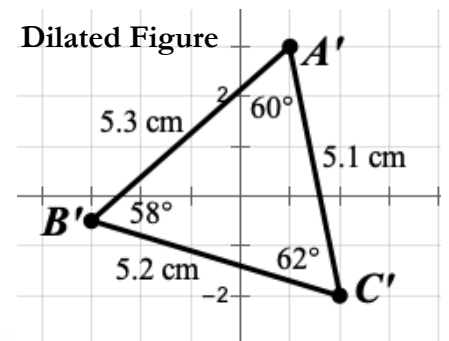
3) Triangle ABC has coordinates $A(-4, -4)$, $B(-3, 2)$ and $C(2, 1)$. Dilate triangle ABC by a scale factor of $\frac{1}{2}$ with a center of dilation at the origin. Draw and label the coordinates of your dilated figure on the graph below.



4) a) What do you notice about the angles and sides of the dilated figure compared to the original figure?



b) Do you think this is always the case when you dilate a figure? Explain your reasoning.

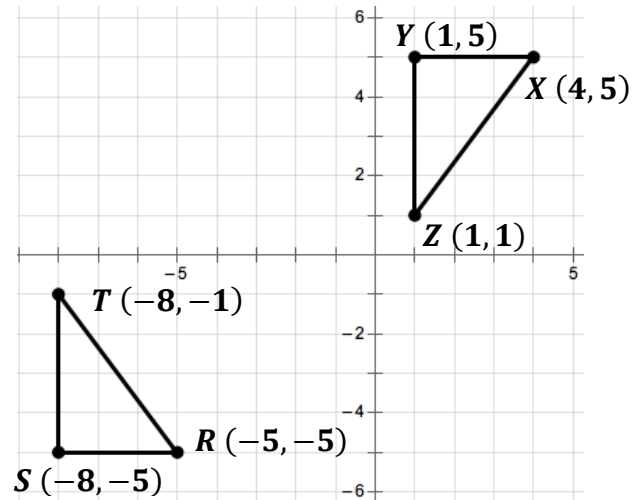


T.5: *Verify Congruence*

1) What are the similarities and differences between Jaxon and Maxine's methods?

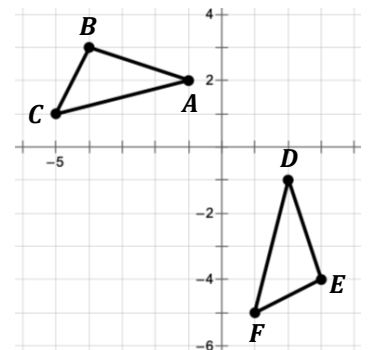
Similarities	Differences

2) Using translations, reflections, and/or rotations, describe the steps that show that $\triangle XYZ \cong \triangle RST$.



3) How do you know if two figures are congruent?

4) To show the triangles are congruent, Maxine says you have to start with $\triangle DEF$. Jaxon believes she would be incorrect, and you have to start with $\triangle ABC$. Their friend, Shannon, says they are both right and you can start with either triangle. Explain who you think is correct and why.



T.6: *Verify Similarity*

1) What are the similarities and differences between Jaxon and Maxine’s methods?

Similarities	Differences

b) Would you prefer to use Jaxon or Maxine’s method to show similarity? Justify your choice.

2) How do you know Jaxon’s “Definition” method shows the two triangles are similar?

3) How do you know Maxine’s “Transformation” method shows the two triangles are similar?

4) Using translations, reflections, rotations, and/or dilations, describe the steps that show that $\triangle ABC \sim \triangle JKL$.

