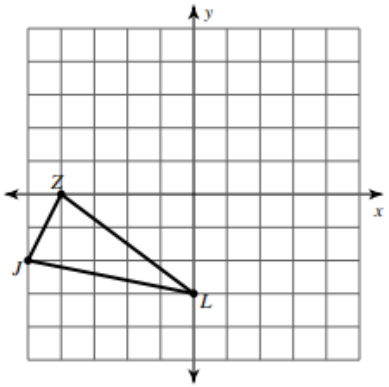
# Transformations Review

1. Rotate the figure below $270°$ around the origin.
   $(x, y) \rightarrow$ (_____, _____)



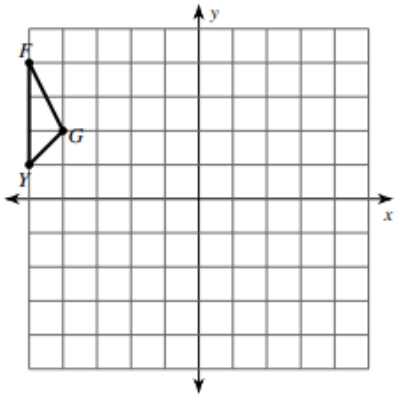

Check your answer:

$Z($____, ____$) \rightarrow Z'($____, ____$)$

$J($____, ____$) \rightarrow J'($____, ____$)$

$L($____, ____$) \rightarrow L'($____, ____$)$

2. Translate the figure below $4$ units to the right and $1$ unit up.
   $(x, y) \rightarrow$ (_____, _____)



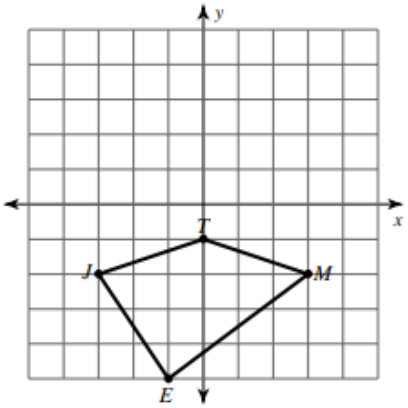

Check your answer:

$F($____, ____$) \rightarrow F'($____, ____$)$

$Y($____, ____$) \rightarrow Y'($____, ____$)$

$G($____, ____$) \rightarrow G'($____, ____$)$

3. Translate the figure 1 unit up and 4 units to the left.
   $(x, y) \rightarrow$ (_____, _____)




Check your answer:

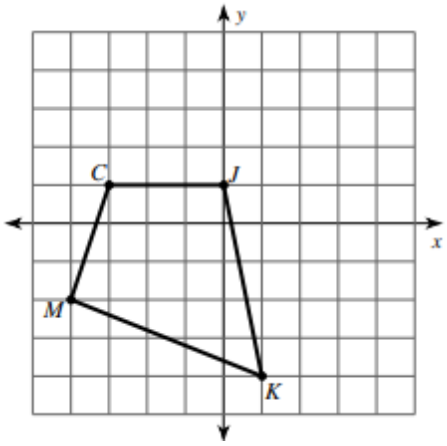
$J($____, ____$) \rightarrow J'($____, ____$)$

$E($____, ____$) \rightarrow E'($____, ____$)$

$M($____, ____$) \rightarrow M'($____, ____$)$

$T($____, ____$) \rightarrow T'($____, ____$)$

4. Reflect the figure below across the $x$ −axis.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

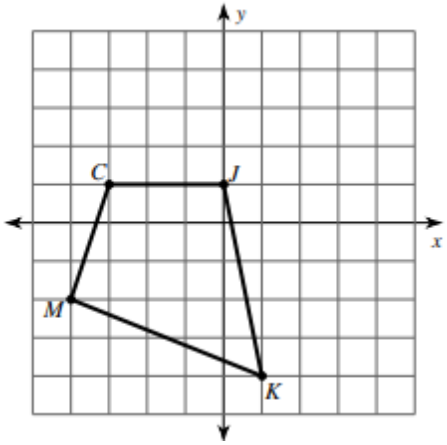
$C$(____, ____) → $C'$(____, ____)

$J$(____, ____) → $J'$(____, ____)

$M$(____, ____) → $M'$(____, ____)

$K$(____, ____) → $K'$(____, ____)

5. Reflect the figure below across the $y$ −axis.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

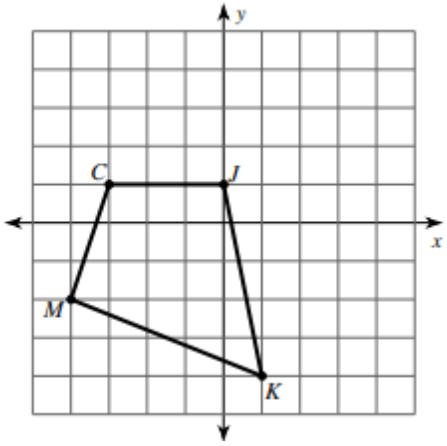
$C$(____, ____) → $C'$(____, ____)

$J$(____, ____) → $J'$(____, ____)

$M$(____, ____) → $M'$(____, ____)

$K$(____, ____) → $K'$(____, ____)

6. Reflect the figure below across the line $y = x$.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

$C$(____, ____) → $C'$(____, ____)

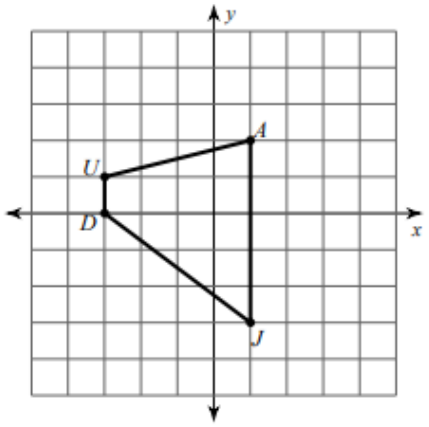
$J$(____, ____) → $J'$(____, ____)

$M$(____, ____) → $M'$(____, ____)

$K$(____, ____) → $K'$(____, ____)

7. Dilate the figure below by a scale factor of 2.

$(x, y) \rightarrow$ (_____, _____)




Check your answer:

$U$(____, ____) → $U'$(____, ____)

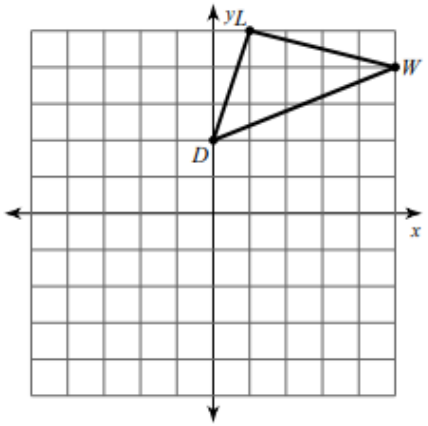
$J$(____, ____) → $J'$(____, ____)

$D$(____, ____) → $D'$(____, ____)

$A$(____, ____) → $A'$(____, ____)

8. Dilate the figure below by a scale factor of $\frac{1}{2}$.

$(x, y) \rightarrow$ (_____, _____)




Check your answer:

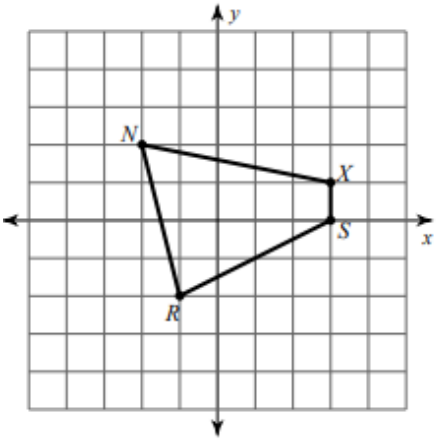
$L$(____, ____) → $L'$(____, ____)

$D$(____, ____) → $D'$(____, ____)

$W$(____, ____) → $W'$(____, ____)

9. Dilate the figure below by a scale factor of $\frac{3}{2}$.

$(x, y) \rightarrow$ (_____, _____)




Check your answer:

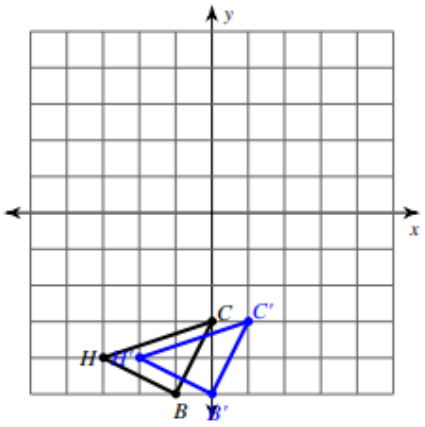
$N$(____, ____) → $N'$(____, ____)

$R$(____, ____) → $R'$(____, ____)

$X$(____, ____) → $X'$(____, ____)

$S$(____, ____) → $S'$(____, ____)

10. Write the rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)



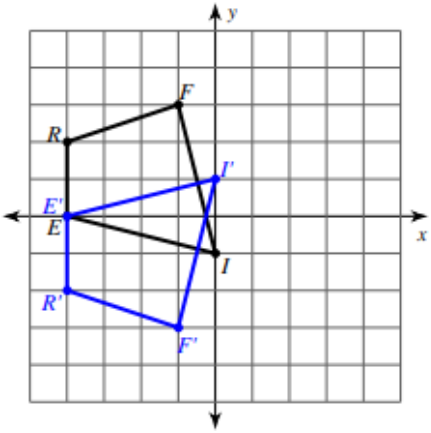

Check your answer:

$C$(____, ____) $\rightarrow C'$(____, ____)

$B$(____, ____) $\rightarrow B'$(____, ____)

$H$(____, ____) $\rightarrow H'$(____, ____)

11. Write the rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

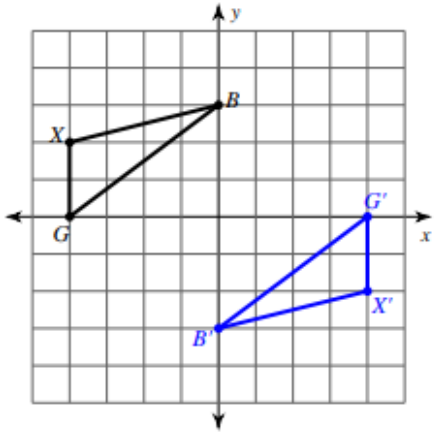
$E$(____, ____) $\rightarrow E'$(____, ____)

$J$(____, ____) $\rightarrow J'$(____, ____)

$R$(____, ____) $\rightarrow R'$(____, ____)

$F$(____, ____) $\rightarrow F'$(____, ____)

12. Write the rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)



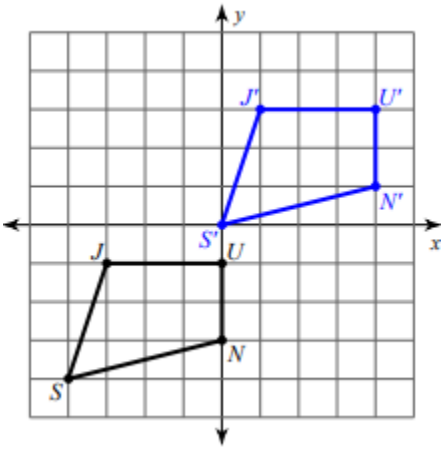

Check your answer:

$X$(____, ____) $\rightarrow X'$(____, ____)

$G$(____, ____) $\rightarrow G'$(____, ____)

$B$(____, ____) $\rightarrow B'$(____, ____)

13. Write a rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

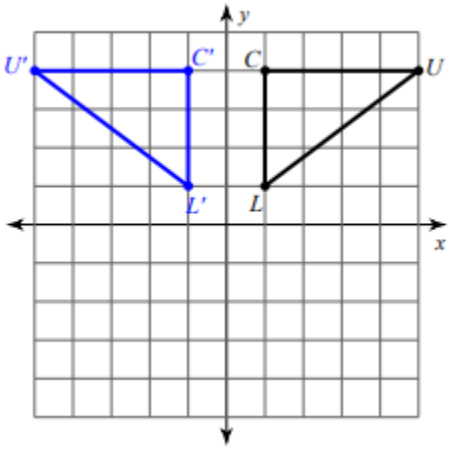
$S($_____, _____$) \rightarrow S'($_____, _____$)$

$J($_____, _____$) \rightarrow J'($_____, _____$)$

$U($_____, _____$) \rightarrow U'($_____, _____$)$

$N($_____, _____$) \rightarrow N'($_____, _____$)$

14. Write a rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)



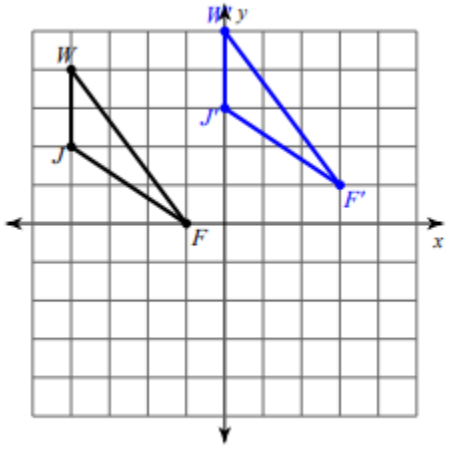

Check your answer:

$C($_____, _____$) \rightarrow C'($_____, _____$)$

$L($_____, _____$) \rightarrow L'($_____, _____$)$

$U($_____, _____$) \rightarrow U'($_____, _____$)$

15. Write a rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)



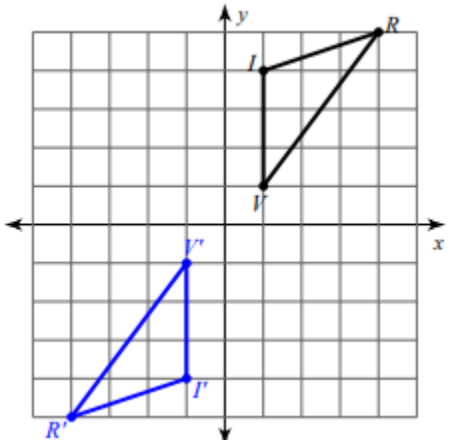

Check your answer:

$W($_____, _____$) \rightarrow W'($_____, _____$)$

$J($_____, _____$) \rightarrow J'($_____, _____$)$

$F($_____, _____$) \rightarrow F'($_____, _____$)$

16. Write a rule for the transformation below.
$(x, y) \rightarrow$ (_____, _____)




Check your answer:

$V$(____, ____) $\rightarrow V'$(____, ____)

$T$(____, ____) $\rightarrow T'$(____, ____)

$R$(____, ____) $\rightarrow R'$(____, ____)

17. Graph the figure, $B(-2,-1), C(-4,1), Z(-3,2), X(-1,5)$ then rotate it $90°$ about the origin.
$(x, y) \rightarrow$ (_____, _____)

18. Graph the figure $K(-2,-1), A(-3,2), N(0,-3), J(-1,-3)$ and then reflect it across the line $y = x$.
$(x, y) \rightarrow$ (_____, _____)

19. Graph the figure $E(2,-1), J(4,2), R(3,-3), S(2,2)$ and then rotate it $180°$ from the origin.
$(x, y) \rightarrow$ (_____, _____)

20. Graph the figure $J(-3,1), F(-2,3), N(-2,0)$ and then translate it $4$ units to the left and $2$ units down.
$(x, y) \rightarrow$ (_____, _____)

21. Graph the figure $J(0,4), V(1,5), G(3,3), E(-1,0)$ and then perform the transformation:
$(x, y) \rightarrow (2x - 1, -y + 2)$

22. Graph the figure $Q(-1,0), S(-1,1), Z(2,0)$ and then perform the transformation: $(x, y) \rightarrow (3x, -2y + 1)$.