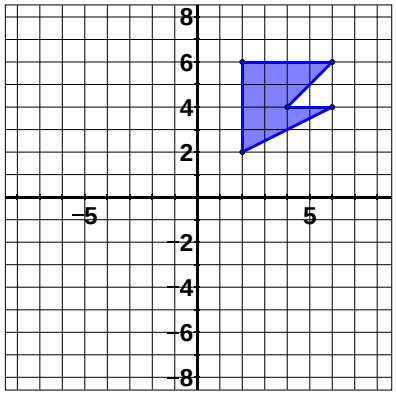
L2-4a **8.G.3**

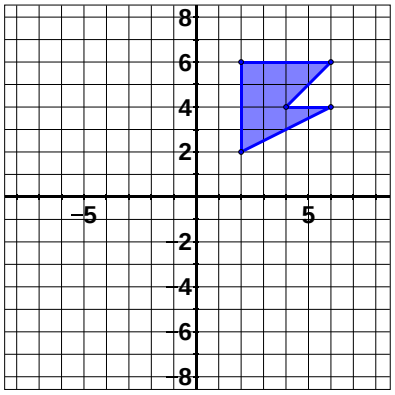
Rotation Practice

Perform the given rotation or series of transformations on each given pre-image. When performing a dilation, use the origin as the center of dilation.

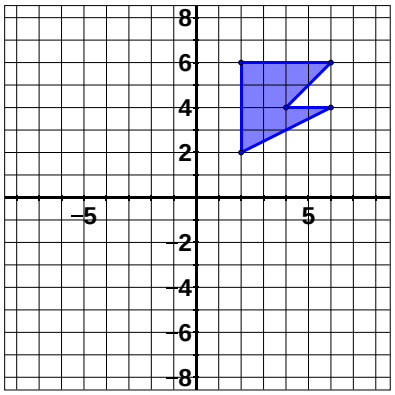
1. Rotate 90°



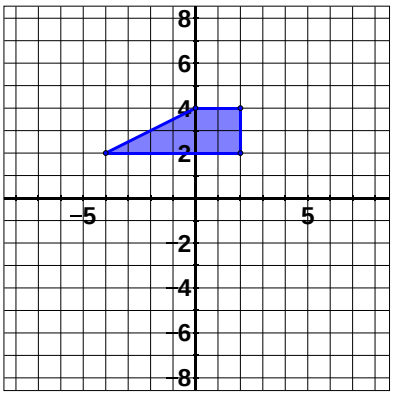
2. Rotate 180°



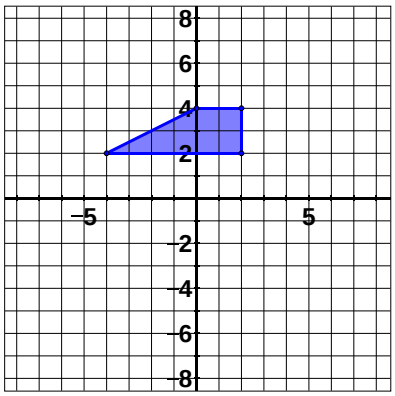
3. Rotate 270°



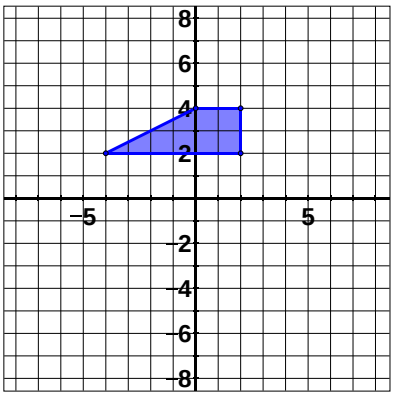
4. Rotate 270°



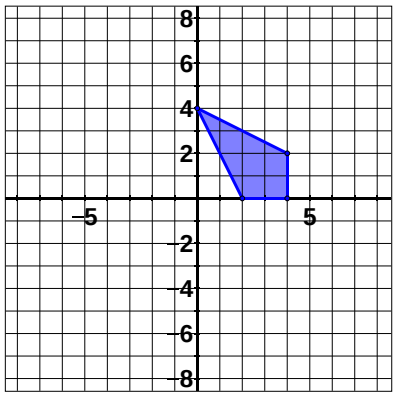
5. Rotate 180°



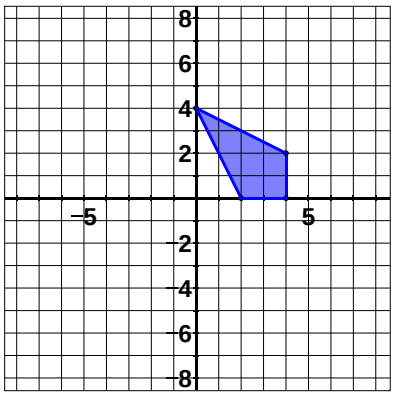
6. Rotate 90°



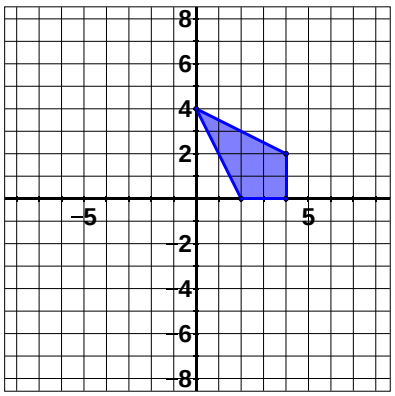
7. Rotate 270°



8. Rotate 90°



9. Rotate 180°

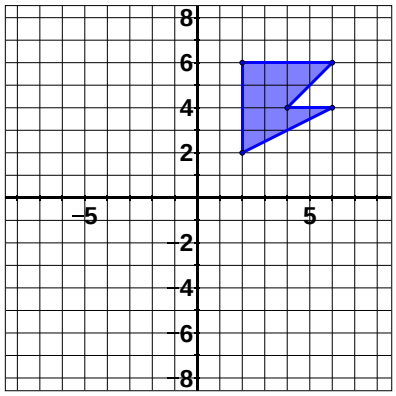


L2-4a

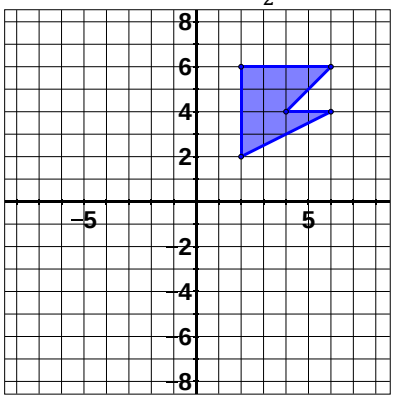
Rotation Practice

8.G.3

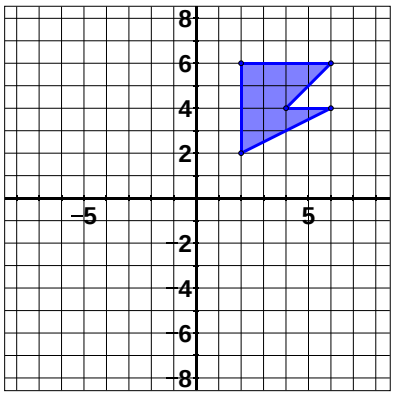
10. Rotate $90°$
and reflect across x-axis



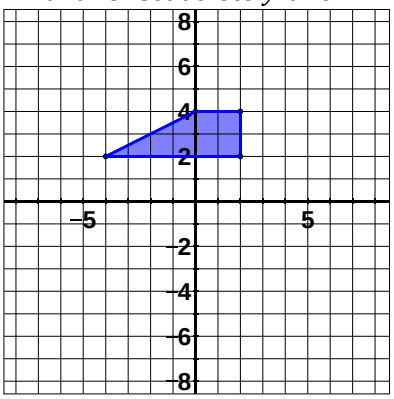
11. Rotate $180°$
and dilate by $c = \frac{1}{2}$



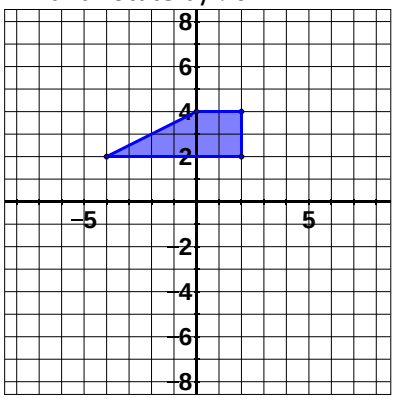
12. Rotate $270°$
and reflect across y-axis



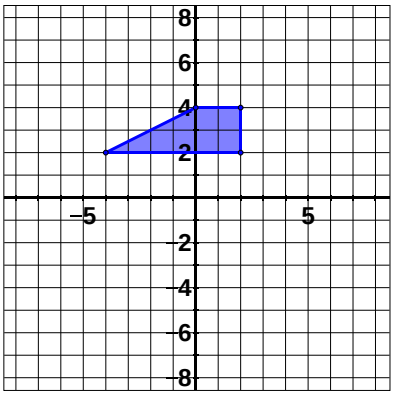
13. Dilate by $c = 2$
and reflect across y-axis



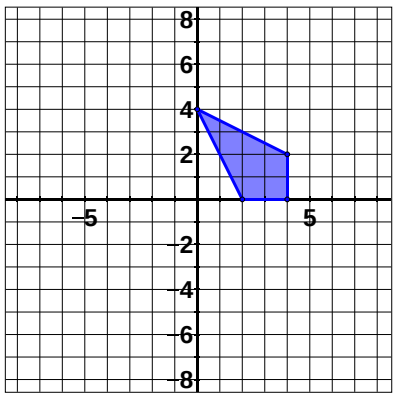
14. Dilate by $c = \frac{1}{2}$
and rotate by $90°$



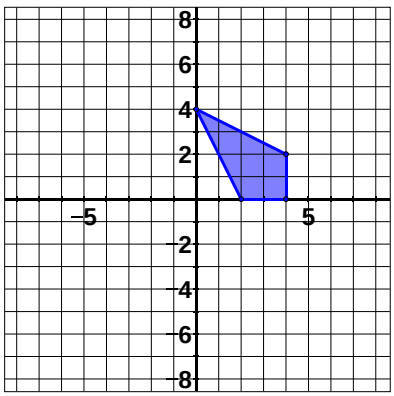
15. Rotate $180°$
and reflect across x-axis



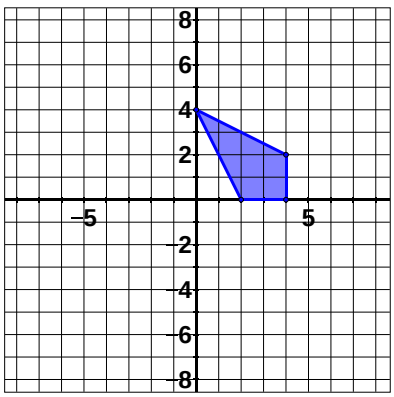
16. Reflect across y-axis
and rotate $90°$



17. Dilate by $c = \frac{1}{2}$
and reflect across x-axis



18. Dilate by $c = 2$
and rotate $90°$



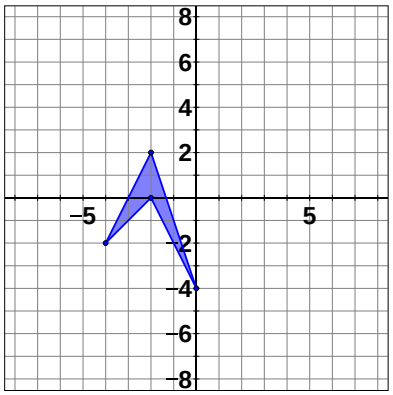
L2-4a

Rotation Practice

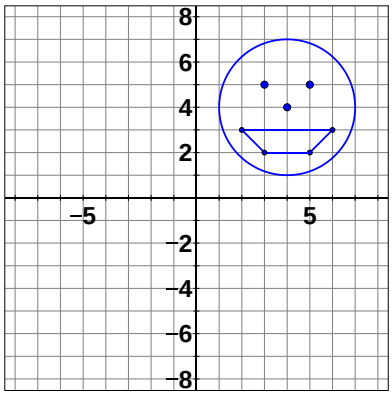
8.G.3

Describe in words the effects of the transformations or series of transformations.

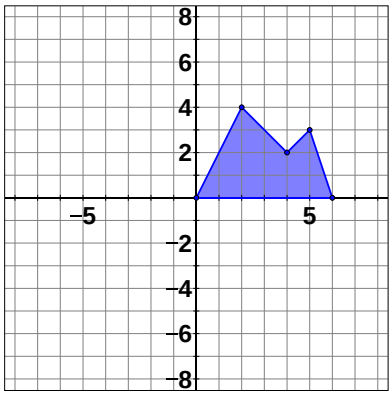
19. Rotate $90°$



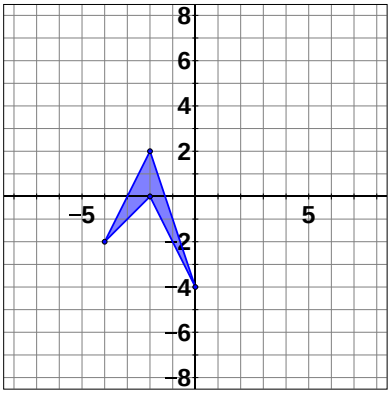
20. Rotate $180°$



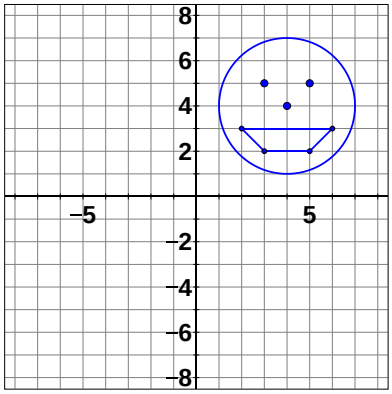
21. Rotate $270°$



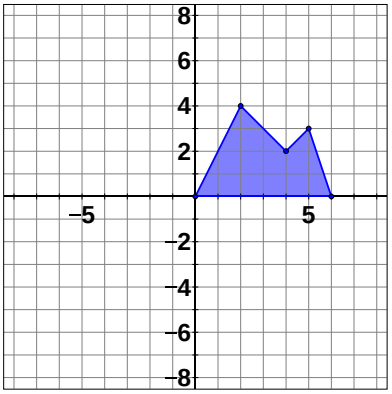
22. Rotate $180°$



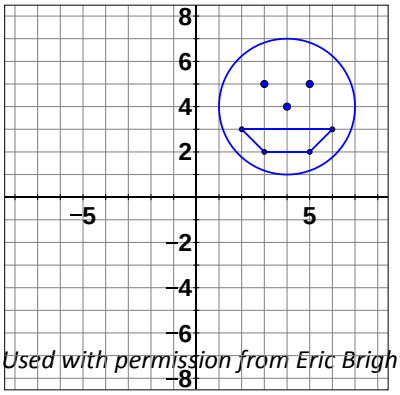
23. Rotate $270°$



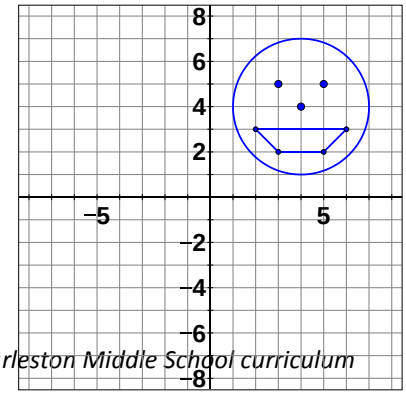
24. Rotate $90°$



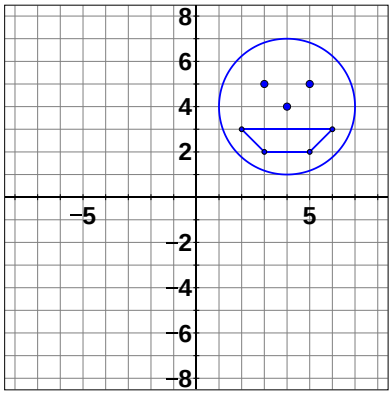
25. Reflect across y-axis and rotate $90°$



26. Dilate by $c = \frac{1}{2}$, center $(0,0)$ and reflect across x-axis



27. Dilate by $c = \frac{1}{4}$, center $(-8,-8)$ and rotate $180°$

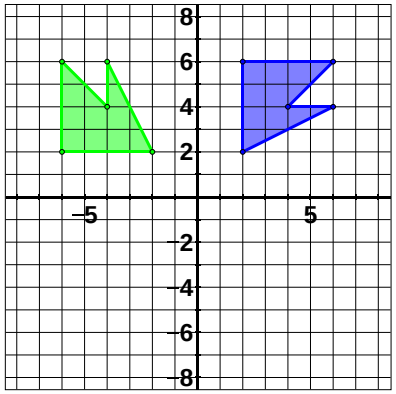


Rotation Practice

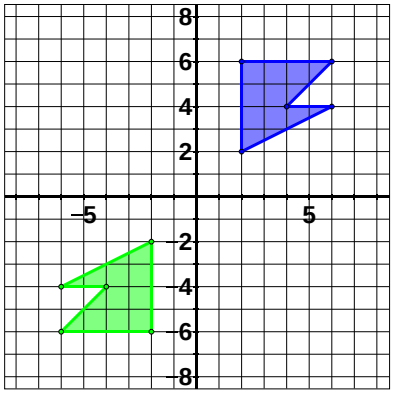
Rotation Practice: Answer Key

Perform the given rotation or series of transformations on each given pre-image. When performing a dilation, use the origin as the center of dilation. The image (answer) is lighter in green.

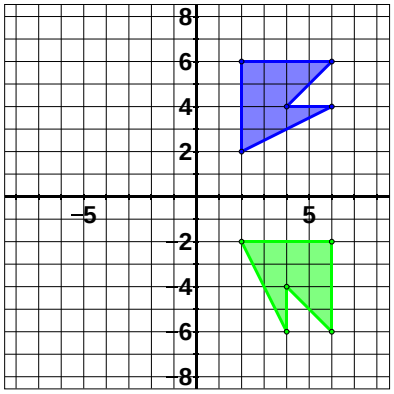
1. Rotate 90°



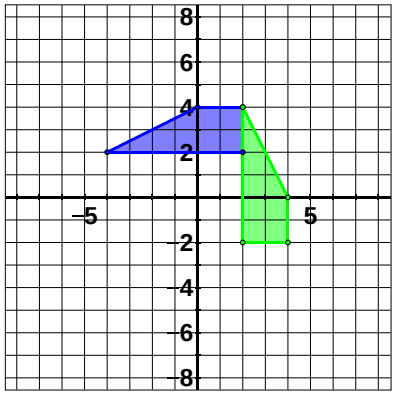
2. Rotate 180°



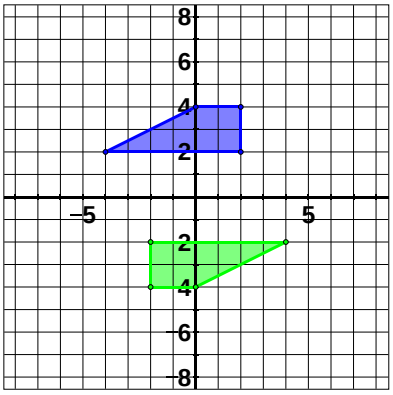
3. Rotate 270°



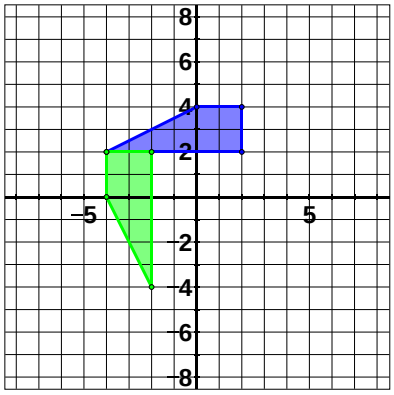
4. Rotate 270°



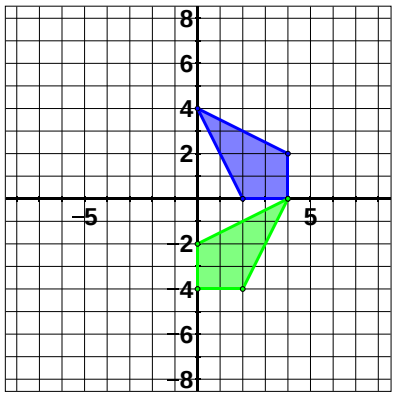
5. Rotate 180°



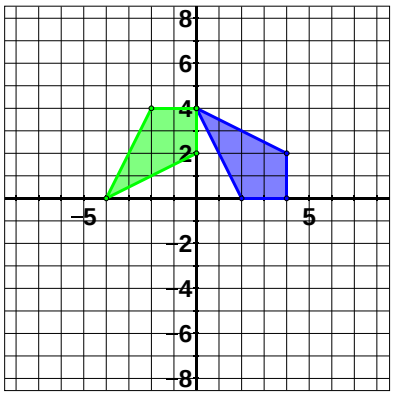
6. Rotate 90°



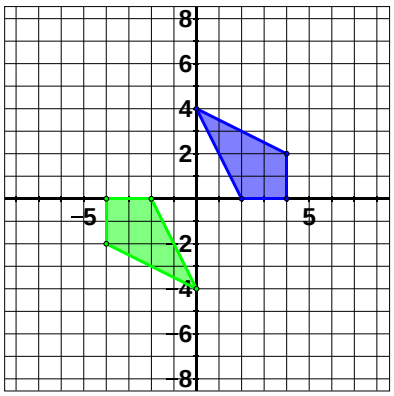
7. Rotate 270°



8. Rotate 90°



9. Rotate 180°

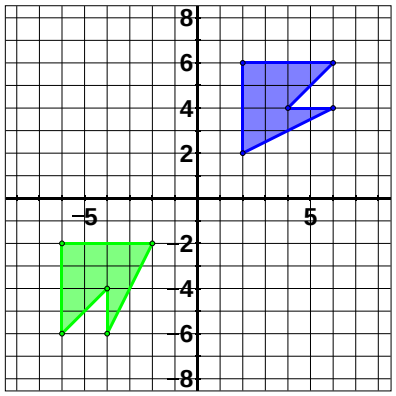


L2-4a

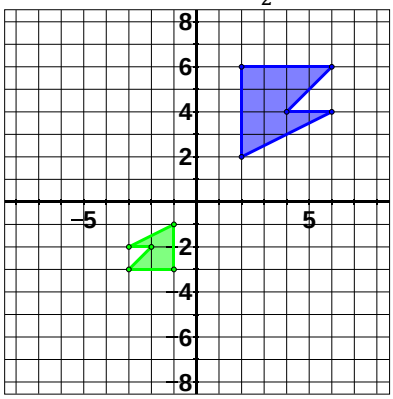
Rotation Practice

8.G.3

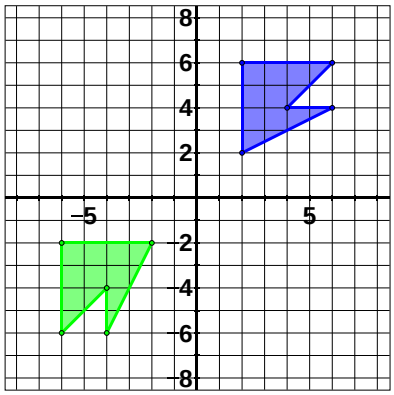
10. Rotate $90°$
and reflect across x-axis



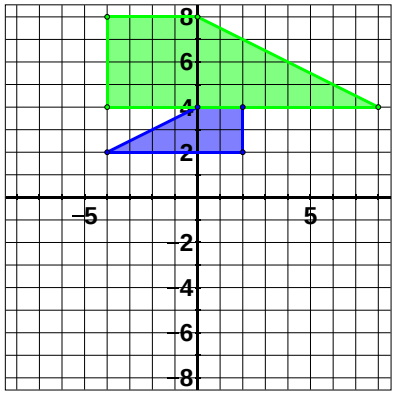
11. Rotate $180°$
and dilate by $c = \frac{1}{2}$



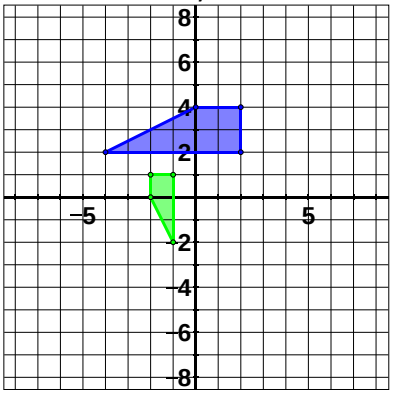
12. Rotate $270°$
and reflect across y-axis



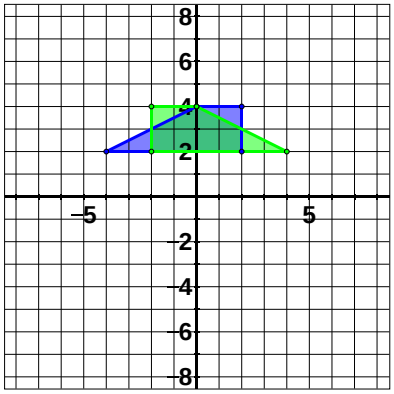
13. Dilate by $c = 2$
and reflect across y-axis



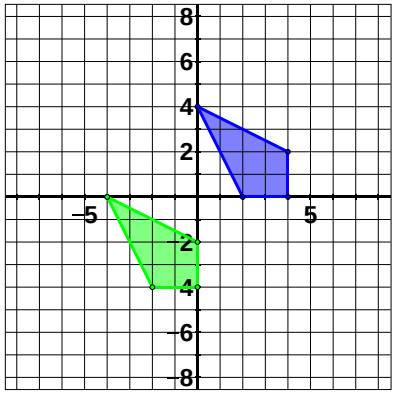
14. Dilate by $c = \frac{1}{2}$
and rotate by $90°$



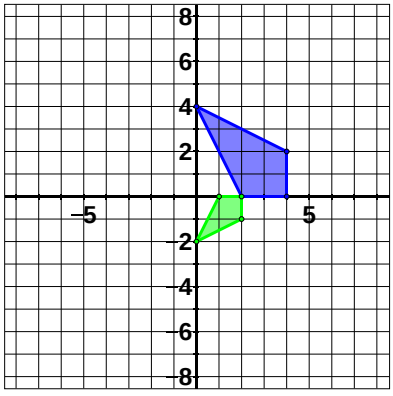
15. Rotate $180°$
and reflect across x-axis



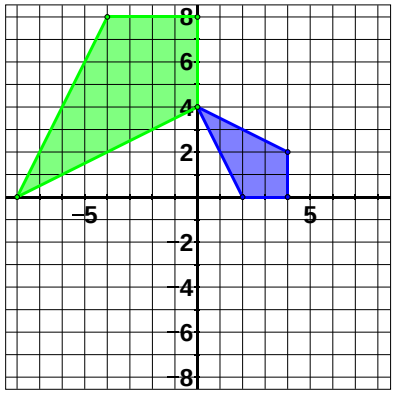
16. Reflect across y-axis
and rotate $90°$



17. Dilate by $c = \frac{1}{2}$
and reflect across x-axis



18. Dilate by $c = 2$
and rotate $90°$

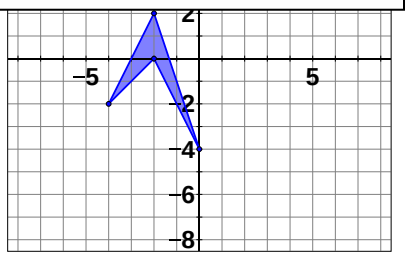


L2-4a **8.G.3**

Rotation Practice

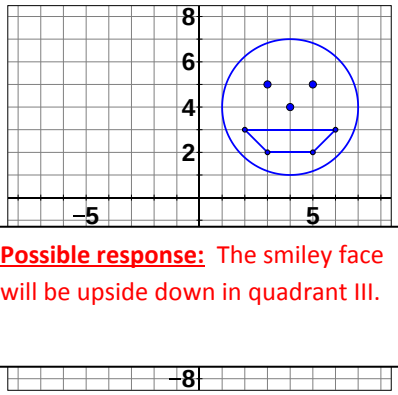
Describe in words the effects of the transformations or series of transformations.

19. Rotate $90°$



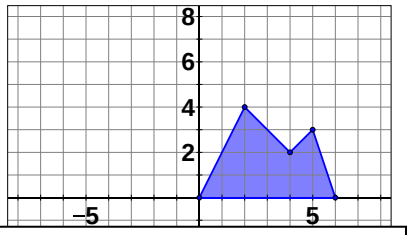
Possible response: The "mouth" will open to the right below the x-axis.

20. Rotate $180°$



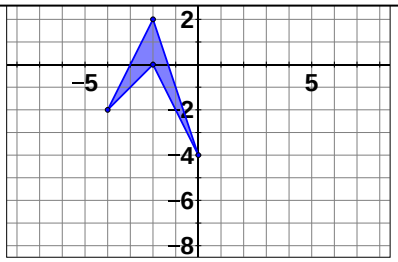
Possible response: The smiley face will be upside down in quadrant III.

21. Rotate $270°$



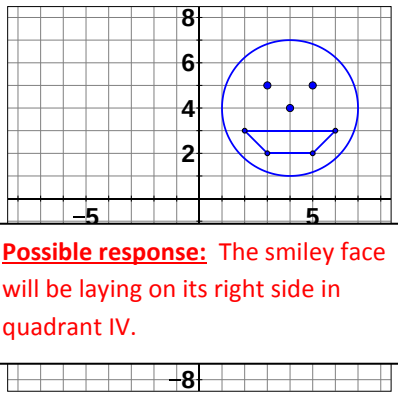
Possible response: The mountain tops will be pointing to the right and sitting on the y-axis in quadrant IV.

22. Rotate $180°$



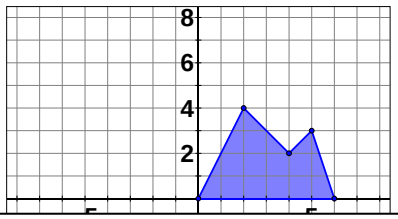
Possible response: It will look like a backwards check mark in quadrants I and IV.

23. Rotate $270°$



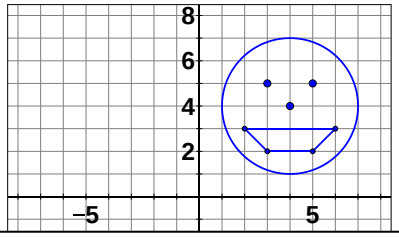
Possible response: The smiley face will be laying on its right side in quadrant IV.

24. Rotate $90°$



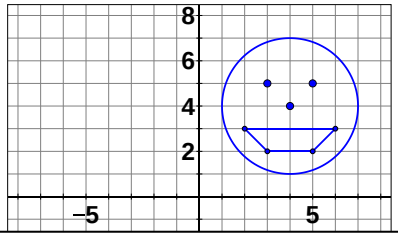
Possible response: The mountain tops will be pointing to the left and sitting on the y-axis in quadrant II.

25. Reflect across y-axis and rotate $90°$



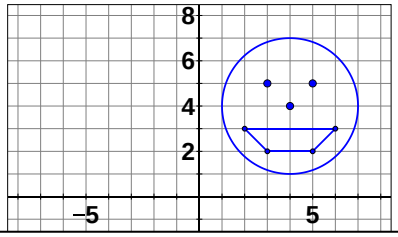
Possible response: The smiley face will be laying on its left side in quadrant III.

26. Dilate by $c = \frac{1}{2}$, center $(0,0)$ and reflect across x-axis



Possible response: The smiley face will shrink to half size and flip upside down into quadrant IV.

27. Dilate by $c = \frac{1}{4}$, center $(-8,-8)$ and rotate $180°$



Possible response: The smiley face will shrink to a quarter of the size and be upside in quadrant I.