1. Using a colored pencil, reflect $\triangle ABC$ over the $x = -3$ line and label the points $A'$, $B'$, and $C'$ respectively. Draw $\triangle A'B'C'$.

2. Using a black pencil, reflect $\triangle A'B'C'$ over the $x = 2$ line and label the points $A''$, $B''$, and $C''$ respectively. Draw $\triangle A''B''C''$.

3. Draw arrows from $A$ to $A''$, from $B$ to $B''$, from $C$ to $C''$ using a different color.

4. What transformation occurred that would map $\triangle ABC$ onto $\triangle A''B''C''$? __________

5. How far did $\triangle ABC$ move to become $\triangle A''B''C''$? __________ In what direction? __________

6. Write a composite for this situation that maps the first triangle to the last triangle.
7. Using a colored pencil, reflect $\triangle ABC$ over the $x = 2$ line and label the points $A', B'$, and $C'$ respectively. Draw $\triangle A'B'C'$.

8. Using a black pencil, reflect $\triangle A'B'C'$ over the $x = -3$ line and label the points $A'', B''$, and $C''$ respectively. Draw $\triangle A''B''C''$.

9. Draw arrows from $A$ to $A''$, from $B$ to $B''$, from $C$ to $C''$ using a different color.

10. What transformation occurred from $\triangle ABC$ to become $\triangle A''B''C''$? ________

11. How far did $\triangle ABC$ move to become $\triangle A''B''C''$? ________ In what direction? ________

12. Write a composite for this situation that maps the first triangle to the last triangle.

13. Using a colored pencil, reflect $\triangle ABC$ over the $x = -7$ line and label the points $A', B'$, and $C'$ respectively. Draw $\triangle A'B'C'$.

14. Using a black pencil, reflect $\triangle A'B'C'$ over the $x = -2$ line and label the points $A'', B''$, and $C''$ respectively. Draw $\triangle A''B''C''$.

15. Draw arrows from $A$ to $A''$, from $B$ to $B''$, from $C$ to $C''$ using a different color.

16. What transformation occurred from $\triangle ABC$ to become $\triangle A''B''C''$? ________

17. How far did $\triangle ABC$ move to become $\triangle A''B''C''$? ________ In what direction? ________

18. Write a composite for this situation that maps the first triangle to the last triangle.
19. Conjecture on any relationship there might be between the distance between the lines and the distance the original triangle moves to reach the ending triangle.

20. Graph the line $x = 4$. Find a second line of reflection so that the composite of the two reflections will translate $\Delta ABC$ 10 units to the right. Write the composite.
21. Graph the lines $y = 3$ and $y = -2$.
22. Using a colored pencil, reflect $\triangle ABC$ over the $y = 3$ line and label the points $A'$, $B'$, and $C'$ respectively. Draw $\triangle A'B'C'$.
23. Using a black pencil, reflect $\triangle A'B'C'$ over the $y = -2$ line and label the points $A''$, $B''$, and $C''$ respectively. Draw $\triangle A''B''C''$.
24. Draw arrows from $A$ to $A''$, from $B$ to $B''$, from $C$ to $C''$ using a different color.
25. What transformation occurred from $\triangle ABC$ to become $\triangle A''B''C''$? ___________
26. How far did $\triangle ABC$ move to become $\triangle A''B''C''$? ___________ In what direction? ___________
27. Write a composite for this situation that maps the first triangle to the last triangle.
28. Graph the lines $y = 3$ and $y = -2$.
29. Using a colored pencil, reflect $\triangle ABC$ over the $y = -2$ line and label the points $A'$, $B'$, and $C'$ respectively. Draw $\triangle A'B'C'$.
30. Using a black pencil, reflect $\triangle A'B'C'$ over the $y = 3$ line and label the points $A''B''C''$ respectively. Draw $\triangle A''B''C''$.
31. Draw arrows from $A$ to $A''$, from $B$ to $B''$, from $C$ to $C''$ using a different color.
32. What transformation occurred from $\triangle ABC$ to become $\triangle A''B''C''$? __________
33. How far did $\triangle ABC$ move to become $\triangle A''B''C''$? __________ In what direction? __________
34. Write a composite for this situation that maps the first triangle to the last triangle.

35. What conjectures can you make about the composite of two reflections over two parallel lines?

Adapted from Macomb Mathematics Science Technology Center