

## 10.2A Transformations of Similar Rigid Objects

NAME: \_\_\_\_\_ HOUR: \_\_\_\_\_

Use the following website to explore and determine a rule for transformation of rigid objects.

<http://www.shodor.org/interactivate/activities/Transmographer/>

Use a TRIANGLE FOR THE FOLLOWING QUESTIONS.

1. Write the ordered pairs for the preimage below and name them.
2. Translate the object on the x axis 3 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
3. Translate the object on the x axis 1 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
4. Translate the object on the x axis -2 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
5. Translate the object on the x axis -3 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
6. NOW THE IMPORTANT PART. Write a rule for the order pairs the works for all translations right or left. Check your rule, by using the website.
7. Translate the object on the y axis 3 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
8. Translate the object on the y axis 1 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.
9. Translate the object on the y axis -2 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.

10. Translate the object on the y axis -4 units. Write the new corresponding order pairs, how did it move the preimage? Then hit the reset button.

11. NOW THE IMPORTANT PART. Write a rule for the order pairs the works for all translations up or down. Check your rule, by using the website.

Use a **different** shape for **each** of the following questions

12. Write the ordered pairs for the preimage below and name them. Reflect the object about the x-axis = 0, write the new corresponding order pairs.

13. Write the ordered pairs for the preimage below and name them. Reflect the object about the x-axis = 0, write the new corresponding order pairs.

14. Write the ordered pairs for the preimage below and name them. Reflect the object about the x-axis = 0, write the new corresponding order pairs.

15. NOW THE IMPORTANT PART. Write a rule for the order pairs the works for all reflections about the x-axis. Check your rule, by using the website.

16. Write the ordered pairs for the preimage below and name them. Reflect the object about the y-axis = 0, write the new corresponding order pairs.

17. Write the ordered pairs for the preimage below and name them. Reflect the object about the y-axis = 0, write the new corresponding order pairs.

18. Write the ordered pairs for the preimage below and name them. Reflect the object about the y-axis = 0, write the new corresponding order pairs.

19. NOW THE IMPORTANT PART. Write a rule for the order pairs the works for all reflections about the y-axis. Check your rule, by using the website.

Use a **different** triangle for **each** of the following questions.

20. Write the ordered pairs for the preimage below and name them. Rotate the triangle 90 degrees around the origin, write the new corresponding order pairs.

21. Write the ordered pairs for the preimage below and name them. Rotate the triangle 90 degrees around the origin, write the new corresponding order pairs.

22. Write the ordered pairs for the preimage below and name them. Rotate the triangle 90 degrees around the origin, write the new corresponding order pairs.

23. NOW THE IMPORTANT PART. Write a rule for the order pairs that works for all rotations 90 degrees about the origin. Check your rule, by using the website.

24. Write the ordered pairs for the preimage below and name them. Rotate the triangle 180 degrees around the origin, write the new corresponding order pairs.

25. Write the ordered pairs for the preimage below and name them. Rotate the triangle 180 degrees around the origin, write the new corresponding order pairs.

26. Write the ordered pairs for the preimage below and name them. Rotate the triangle 180 degrees around the origin, write the new corresponding order pairs.

27. NOW THE IMPORTANT PART. Write a rule for the order pairs that works for all rotations 180 degrees about the origin. Check your rule, by using the website.

28. Write the ordered pairs for the preimage below and name them. Rotate the triangle 270 degrees around the origin, write the new corresponding order pairs.

29. Write the ordered pairs for the preimage below and name them. Rotate the triangle 270 degrees around the origin, write the new corresponding order pairs.

30. Write the ordered pairs for the preimage below and name them. Rotate the triangle 270 degrees around the origin, write the new corresponding order pairs.

31. NOW THE IMPORTANT PART. Write a rule for the order pairs the works for all rotations 270 degrees about the origin. Check your rule, by using the website.

32. What would the rule be if we rotated an object -90 degrees?

33. What would the rule be if we rotated an object -180 degrees?

34. What would the rule be if we rotated an object -270 degrees?

35 Class togetherness.