

Answer Sheet for Transformations of Functions and Relations Investigation

Name _____

Translations

1. What is the effect of replacing x with $(x-3)$?
2. What is the effect of replacing x with $(x-3)$?
3. What is the effect of changing the horizontal translation from 0 to 3?
4. What is the effect of replacing x with $(x+1)$?
5. What is the effect of replacing x with $(x+4)$?
6. What is the effect of replacing x with $(x-3)$?
7. What is the effect of replacing x with $(x+5)$?
8. What is the effect of replacing y with $(y-3)$?
9. What is the effect of replacing y with $(y-3)$?
10. What is the effect of replacing x with $(x-3)$?

Translations (continued)

11. What is the effect of replacing x with $(x-3)$?

12. What is the effect of replacing x with $(x+4)$?

13. What is the effect of replacing x with $(x+2)$?

14. What is the effect of replacing y with $(y-3)$?

15. What is the effect of replacing y with $(y+4)$?

16. What is the effect of replacing y with $(y+3)$?

17. What is the effect of replacing y with $(y-4)$?

18. What is the effect of replacing y with $(y-2)$ and replacing x with $(x-1)$?

19. What is the effect of replacing y with $(y-1)$ and replacing x with $(x+3)$?

20. What is the effect of replacing y with $(y+2)$ and replacing x with $(x-1)$?

Scale Changes

1. What is the effect of replacing x with $\frac{x}{3}$?
2. What is the effect of changing the horizontal scale change from 1 to 5?
3. What is the effect of replacing x with $\frac{x}{0.5}$?
4. What is the effect of replacing y with $\frac{y}{2}$?
5. What is the effect of replacing y with $\frac{y}{0.1}$?
6. What is the effect of replacing y with $\frac{y}{3}$?
7. What is the effect of replacing y with $\frac{y}{0.5}$?
8. What is the effect of replacing x with $\frac{x}{3}$?
9. What is the effect of replacing y with $\frac{y}{0.5}$?
10. What is the effect of replacing y with $\frac{1}{2}y$?

Combining Translations and Scale Changes

For problems 3 – 11, write an equation of the graph.

3.

4.

5.

6.

7.

8.

9.

10.

11.

Reflections

1. What is the effect of replacing x with $\frac{x}{1}$?
2. What is the effect of replacing x with $\frac{x}{-1}$?
3. What is the effect of changing the horizontal scale change from 1 to -1?
4. What is the effect of replacing y with $\frac{y}{-1}$?
5. What is the effect of changing the vertical scale change from 1 to -1?