Name: _____ Date: _____

Fresh Math

Function Transformation Rules - Medium

Describe how the graph of g is obtained from the graph of f.

1. $g(x) = f(-5x)$
2. $g(x) = f(-6x)$
3. $g(x) = f(\frac{3}{2}x)$
4. $g(x) = f(-\frac{1}{2}x)$
5. $g(x) = f(2x)$
6. $g(x) = f(6x)$
7. $g(x) = f(\frac{1}{4}x)$
8. $g(x) = f(4x)$
9. $g(x) = f(-2x)$
10. $g(x) = f(-\frac{2}{3}x)$

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Fresh Math

Function Transformation Rules - Medium

Describe how the graph of g is obtained from the graph of f.

11. $g(x) = f(\frac{1}{2}x)$

12. $g(x) = f(5x)$

13. $g(x) = f(\frac{1}{3}x)$

14. $g(x) = f(3x)$

15. $g(x) = f(-\frac{1}{3}x)$

16. $g(x) = f(-\frac{1}{4}x)$

17. $g(x) = f(\frac{2}{3}x)$

18. $g(x) = f(-3x)$

19. $g(x) = f(-\frac{3}{2}x)$

20. $g(x) = f(-4x)$

Function Transformation Rules - Medium - Answer Key

1. $g(x) = f(-5x)$

   reflect over the y-axis, horizontal compression by 1/5

2. $g(x) = f(-6x)$

   reflect over the y-axis, horizontal compression by 1/6

3. $g(x) = f(\frac{3}{2}x)$

   horizontal compression by 2/3

4. $g(x) = f(-\frac{1}{2}x)$

   reflect over the y-axis, horizontal stretch by 2

5. $g(x) = f(2x)$

   horizontal compression by 1/2

6. $g(x) = f(6x)$

   horizontal compression by 1/6

7. $g(x) = f(\frac{1}{4}x)$

   horizontal stretch by 4

8. $g(x) = f(4x)$

   horizontal compression by 1/4

9. $g(x) = f(-2x)$

   reflect over the y-axis, horizontal compression by 1/2

10. $g(x) = f(-\frac{2}{3}x)$

    reflect over the y-axis, horizontal stretch by 3/2

Function Transformation Rules - Medium - Answer Key

11. $g(x) = f(\frac{1}{2}x)$

horizontal stretch by 2

12. $g(x) = f(5x)$

horizontal compression by 1/5

13. $g(x) = f(\frac{1}{3}x)$

horizontal stretch by 3

14. $g(x) = f(3x)$

horizontal compression by 1/3

15. $g(x) = f(-\frac{1}{3}x)$

reflect over the y-axis, horizontal stretch by 3

16. $g(x) = f(-\frac{1}{4}x)$

reflect over the y-axis, horizontal stretch by 4

17. $g(x) = f(\frac{2}{3}x)$

horizontal stretch by 3/2

18. $g(x) = f(-3x)$

reflect over the y-axis, horizontal compression by 1/3

19. $g(x) = f(-\frac{3}{2}x)$

reflect over the y-axis, horizontal compression by 2/3

20. $g(x) = f(-4x)$

reflect over the y-axis, horizontal compression by 1/4