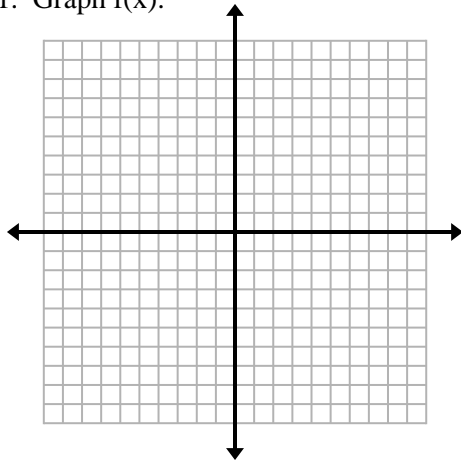


Transformations of Functions

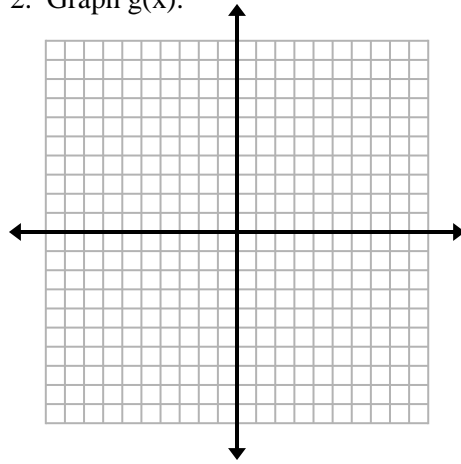
$f(x) = 3x + 2$

$g(x) = 2^x$

1. Graph $f(x)$.

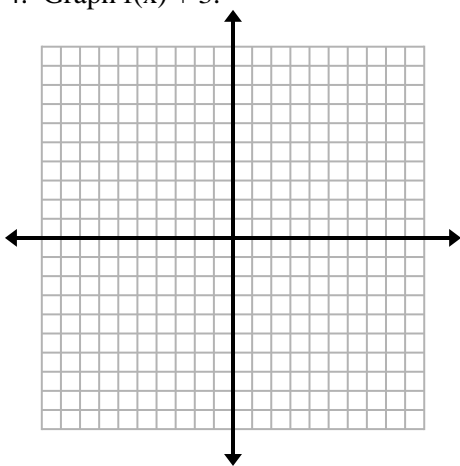


2. Graph $g(x)$.

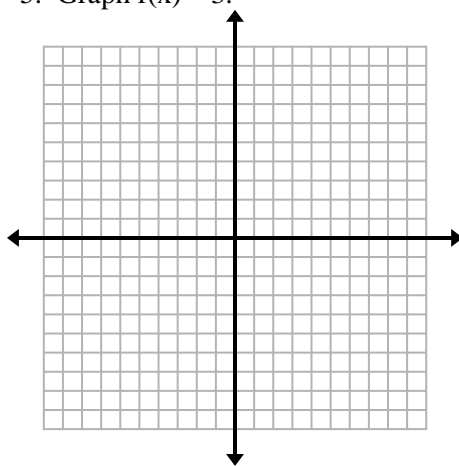


3. Compare and contrast the 2 graphs.

4. Graph $f(x) + 3$.

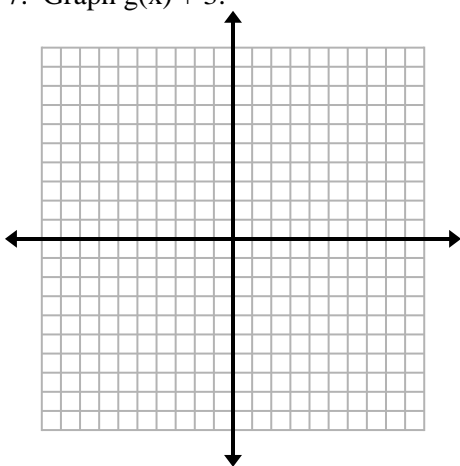


5. Graph $f(x) - 3$.

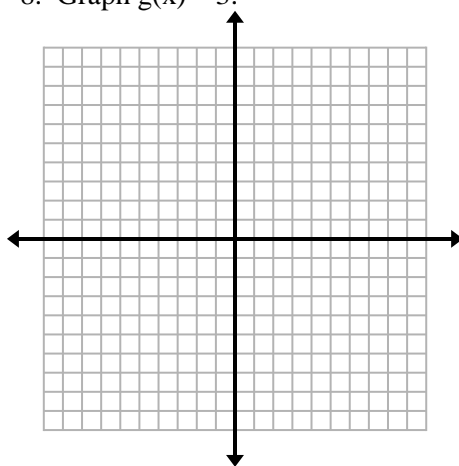


6. Compare and contrast the 2 graphs with the graph of $f(x)$.

7. Graph $g(x) + 3$.



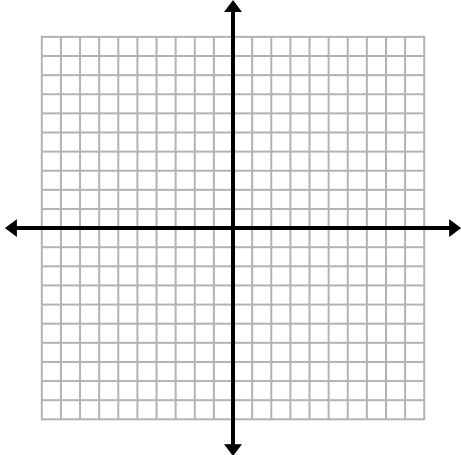
8. Graph $g(x) - 3$.



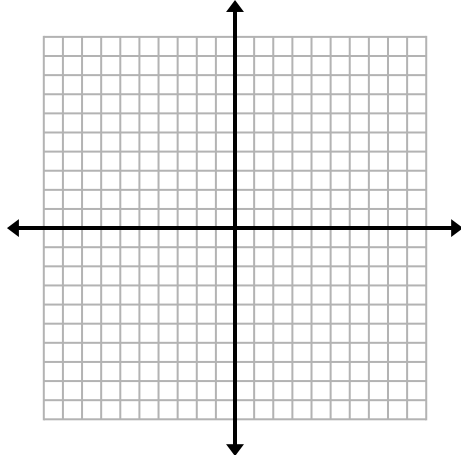
9. Compare and contrast the 2 graphs with the graph of $g(x)$.

10. What does adding or subtracting a constant from the output of a function do to the graph of the function? _____

11. Graph $3 \cdot f(x)$.

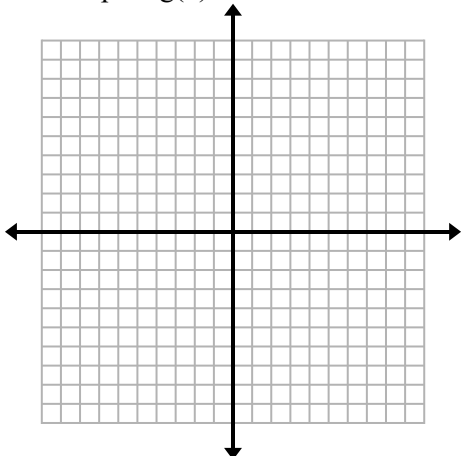


12. Graph $-3 \cdot f(x)$.

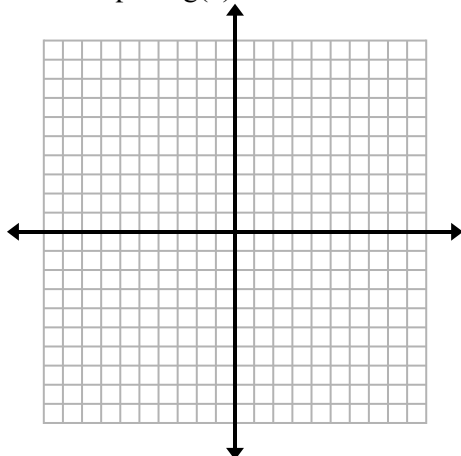


13. Compare and contrast the 2 graphs with the graph of $f(x)$.

14. Graph $3 \cdot g(x)$.



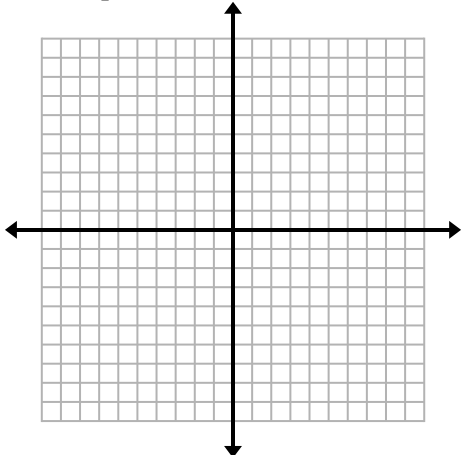
15. Graph $-3 \cdot g(x)$.



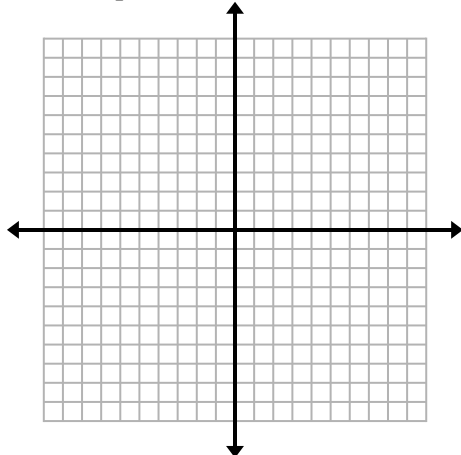
16. Compare and contrast the 2 graphs with the graph of $g(x)$.

17. What does multiplying a constant to the output of a function do to the graph of the function? _____

18. Graph $f(3x)$.

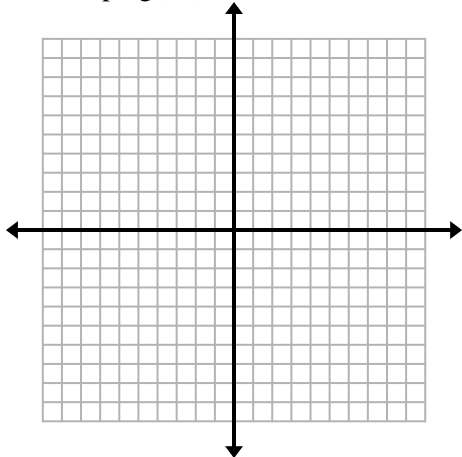


19. Graph $f(-3x)$.

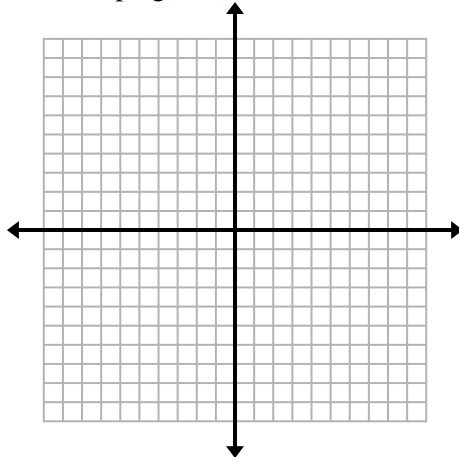


20. Compare and contrast the 2 graphs with the graph of $f(x)$.

21. Graph $g(3x)$.



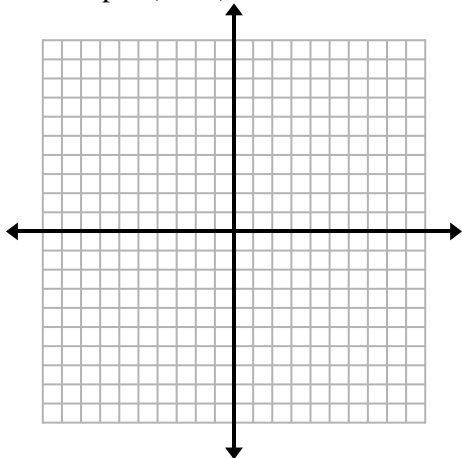
22. Graph $g(-3x)$.



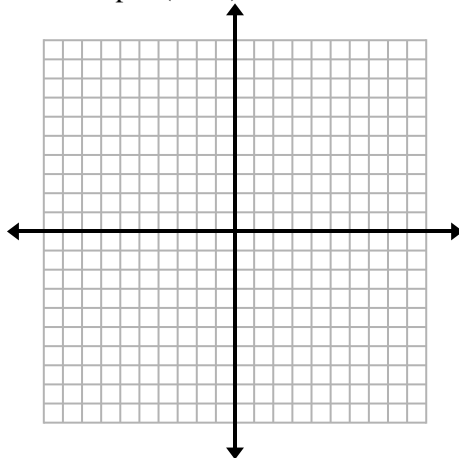
23. Compare and contrast the 2 graphs with the graph of $g(x)$.

24. What does multiplying a constant to the input of the function do to the graph of the function? _____

25. Graph $f(x + 3)$.

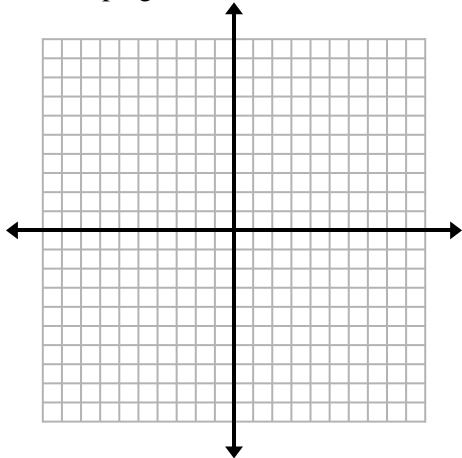


26. Graph $f(x - 3)$.

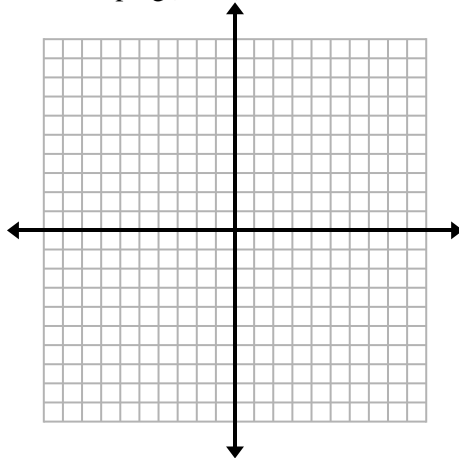


27. Compare and contrast the 2 graphs with the graph of $f(x)$.

28. Graph $g(x + 3)$.



29. Graph $g(x - 3)$.



30. Compare and contrast the 2 graphs with the graph of $g(x)$.

31. What does adding or subtracting a constant to the input of the function do to the graph of the function? _____
