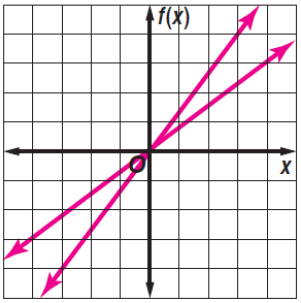
6.1 **Answer Key**

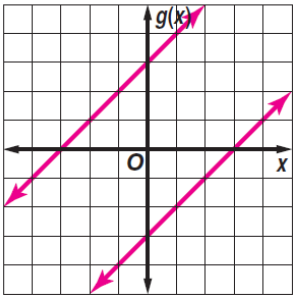
1. $\{(3,0),(2,4),(-6,5)\}$

2. $\{(-4,-5),(2,1),(4,3),(8,7)\}$

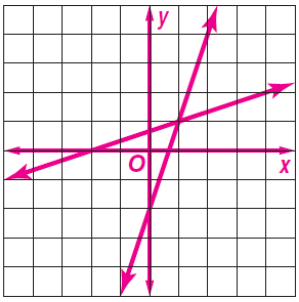
3. $f^{-1}(x) = \frac{4}{3}x$



4. $g^{-1}(x) = x - 3$



5. $y = \frac{x+2}{3}$

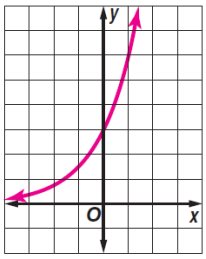


6. $f^{-1}(x) = \frac{x}{9}$; It will allow them to convert the square footage of their kitchen floor to square yards, so they can then calculate the cost of the new flooring.

7. $539.70

6.2 **Answer Key**

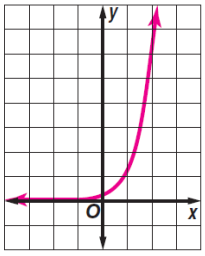
1.



Domain: all real numbers; Range: all positive real numbers

2.

domain: all real numbers; range: all positive numbers



Domain: all real numbers; Range: all positive real numbers

4. growth

5. decay

6. decay

7. 3

8. 4

9. $-\frac{1}{2}$

10. $-\frac{7}{4}$

11. $\frac{2}{3}$

12. 6

13. $y = \left(\frac{1}{3}\right)^x$

14. $y = 4(3)^x$

15. $y = 3\left(\frac{1}{2}\right)^x$

16. $y = 5(3)^x$

13. 27

14. $x^{\sqrt{14}}$

15. $5^{6\sqrt{3}}$

16. $x^{2\pi}$

6.3 **Answer Key**

1. $\log_2 128 = 7$

2. $\log_3 \frac{1}{81} = -4$

3. $\log_{\frac{1}{7}} \frac{1}{343} = 3$

4. $15^2 = 225$

5. $3^{-3} = \frac{1}{27}$

6. $4^{\frac{5}{2}} = 32$

7. 3

8. 6

9. 2.5

10. 4

11. $\frac{4}{3}$

12. $\frac{1}{2}$

13. $\frac{5}{3}$

14. $\frac{1}{18}$

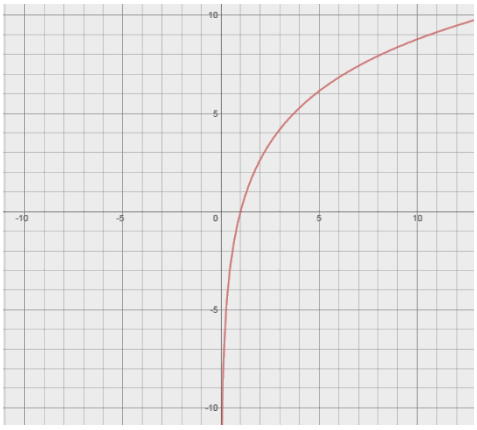
15. $\frac{1}{8}$

16. 10

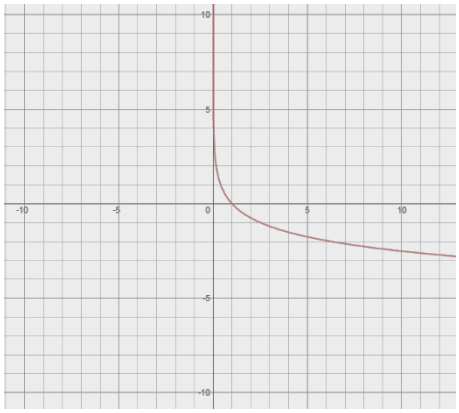
17. 4

18. 15

19.



20.



6.4 **Answer Key**

1. 3

2. 27

3. 4

4. $-\frac{5}{2}$

5. 3

6. 2 and -5

7. $\frac{8}{19}$

8. $\frac{4}{7}$

9. 9

10. 1

11. $\frac{1}{25}$

12. 4