1. Consider \( f(x) = x^2 \).
   
   a. Let \( a = 2 \) and \( b = 5 \). Find the average rate of change of \( f(x) \) between \( x = a \) and \( x = b \).

   b. Let \( a = -3 \) and \( b = 11 \). Find the equation of the secant line through \( (a, f(a)) \) and \( (b, f(b)) \).

6. Consider \( f(x) = x^2 \).
   
   a. Let \( a = 2 \) and \( b = 5 \). Find the y-intercept of the secant line connecting \( (a, f(a)) \) and \( (b, f(b)) \).

   b. Repeat for part (a) \( a = -3 \) and \( b = 11 \).

10. Sketch each graph.

   a. \( y = x^3 \)

   b. \( y = x^3 - 1 \)

   c. \( y = (x + 4)^3 \)

   d. \( y = (x + 4)^3 - 1 \)