Find an equation of a line that:
1. is parallel to y-axis and passing through (36, -36)
2. passes through (8, -18) and the origin
3. passes through (-1, 5) and parallel to \( y = 2x \)
4. is horizontal and passing through (3, 8)
5. has x-intercept = 1 and y-intercept = -3
6. passes through (-1, -2) and perpendicular to the line \( 5x - 2y + 398 = 0 \)

Determine whether the lines below are parallel, perpendicular or neither:
7. The lines \( 9x - 6y + 1 = 0 \) and \( 2x + 3y - 7 = 0 \)
8. The line \( x = -12 \) and the y-axis

9. Find the slope and the y-intercept of the line \( 11x - 2y - 26 = 0 \)
10. Find a linear function \( f(x) \) with slope 5 and \( f(-3) = 1 \)
11. Does the point \((-5, -2)\) lie on the line passing through the points \((-3, 0)\) and \((4, 7)\)

For the following lines, determine whether the slope is: 0, 1, -1 or not defined.
Section: 3.3

1. Find a vertex of the parabola \( f(x) = x^2 - 2x + 9 \)
2. Find a vertex of \( y = 8 - x^2 \)

3. For the function \( h(x) = 3x - x^2 - 1 \):
   a. Find the maximum or minimum value.
   b. Does the graph opens upward or downward?

4. Find the domain and the range of the function: \( f(x) = x^2 + 2x - 4 \)

5. Find \( a, b \) and \( c \) such that the quadratic function \( y = f(x) = a(x - b)(x - c) \) has
   \( x \)-intercepts \(-1/2\) and \(3\), and \( y \)-intercept \(6\).

Section: 3.4

Solve the following systems:

1. \[
   \begin{align*}
   2x + 3y - 1 &= 0 \\
   3x - y - 7 &= 0
   \end{align*}
   \]

2. \[
   \begin{align*}
   \frac{5}{3}x - \frac{1}{2}y &= 5 \\
   \frac{2}{3}x - \frac{1}{5}y &= 2
   \end{align*}
   \]

3. \[
   \begin{align*}
   2x - y &= 3(x + y) \\
   2(x - 1) + y &= x + 1
   \end{align*}
   \]

4. Find \(a\) and \(b\) such that the line \( y = ax + b \) passes through the points \((1,3)\) and \((-1,-5)\).

5. Suppose \( f(x) \) is a linear function with \( f(1) = 7 \) and \( f(-1) = 3 \). Find \( f(x) \).