5. (5 points) Find the distance between the points \((-\frac{2}{3}, \frac{3}{2})\), \((\frac{7}{3}, 2)\). Simplify your answer. (1.1.4 #25)

6. (5 points) Find the x- and y- intercepts of the graph of the function \(y = 2\sqrt{x+4} - 2\). (1.2.2 #46)

7. (3 points) Let \(y = x^2 - y^2\). Determine whether or not the equation represents \(y\) as a function of \(x\). Justify your answer. (1.3.1 #36)

8. (4 points) Let \(f(x) = x^2 - 3x + 2\). Find \(f(x - 4)\) and \(f(-x)\). Simplify your answer. (1.4.2 #14)

9. (4 points) Let \(f(x) = \frac{3x^2 - 12x}{4 - x^2}\). Find \(f(0)\) and solve \(f(x) = 0\). Simplify your answer. (1.4.2 #34)

10. (4 points) Let

\[
f(x) = \begin{cases} 
  x^2 & \text{if } x \leq -1 \\
  \sqrt{1 - x^2} & \text{if } -1 < x \leq 1 \\
  x & \text{if } x > 1.
\end{cases}
\]

Find \(f(0), f(-3), f(1), f(-1)\). Simplify your answer. (1.4.2 #36)

11. (5 points) Find the domain of the function \(f(x) = \frac{\sqrt{6x - 2}}{x^2 - 36}\). Write your answer using interval notation. (1.4.2 #53)