Exercise 1: (3.25 ptos)

   a) Find the **general** equation of the straight line that goes through the points $A(-2,5)$ and $B(3,7)$

   b) Given the straight line $4x-3y+9=0$ find the values of the slope and the y-intercept

   c) Find a straight line that's parallel to $3x-5y-10=0$ and goes through the point $P(-3,4)$

   d) Find the equation of the straight line with a slope $m=-5$ that goes through the point $Q(1,-4)$

Exercise 2: (1.25 ptos) Plot the graph of the parabola $f(x)=2x-x^2$, studying the points where it crosses the axes, the coordinates of the vertex and finding as many more points as necessary

Exercise 3: (1.5 ptos) Find the domain of the following functions:
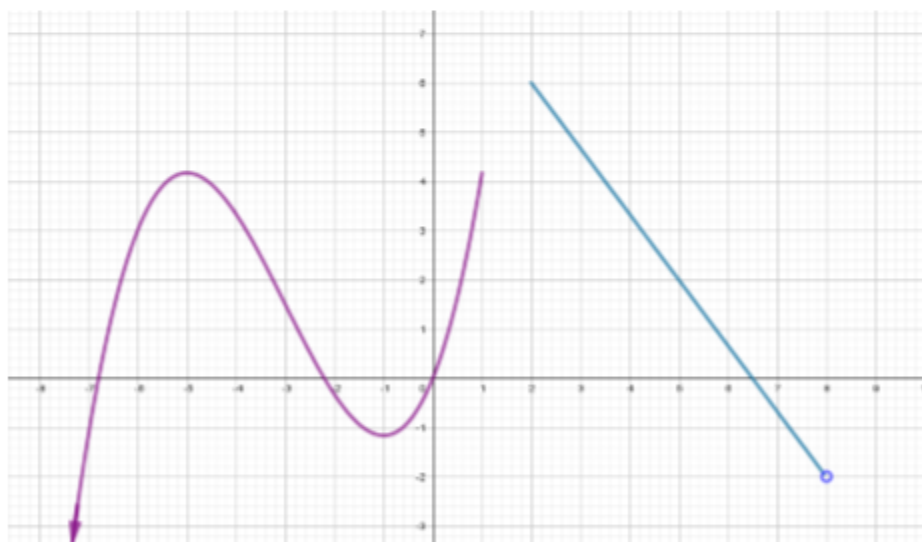
   a) $f(x)=\dfrac{\sqrt[3]{x-1}}{x^2-5x+6}$
          b) $f(x)=\dfrac{x^2-4}{\sqrt{x-9}}$
          c) $f(x)=\sqrt[4]{x+1}$

Exercise 4: (2 ptos) Plot the graph of the piecewise function:

$$f(x)=\begin{cases} 1-x & -5<x\le 1 \\ x^2-4x+3 & 1<x<5 \\ 3 & x\ge 5 \end{cases}$$

Exercise 5: (2 ptos) Given the graph of a certain function:

   a) Indicate its domain and its image

   b) Indicate the points where the function crosses the axes

   c) Study its monotony

   d) Study the extrema