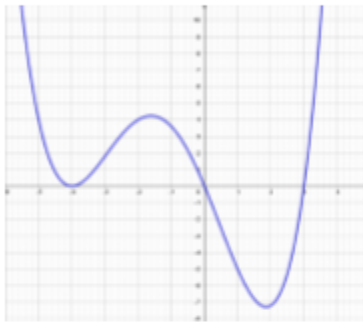**Exercise 1: (1.75 points)** Solve the following equations:

a) $x + \sqrt{4x+1} = 5$

b) $\sqrt{x-3} + \sqrt{x+5} = 4$

Exercise 2: (0.75 points) Find the points where $f(x) \geq 0$:

Exercise 3: (2.25 points) Solve the following non-linear simultaneous equations with two variables:

a) $\left. \begin{array}{l} xy = 20 \\ x^2 - 3y^2 = 88 \end{array} \right\}$

b) $\left. \begin{array}{l} 2x - y = 1 \\ 3x^2 - y^2 = 2 \end{array} \right\}$

Exercise 4: (2 points) Solve the following systems of inequalities:

a) $\left. \begin{array}{l} x^2 - 6x + 5 < 0 \\ x^2 - 36 \geq 0 \end{array} \right\}$

b) $\left. \begin{array}{l} 4 - x^2 > 0 \\ x^2 - 1 < 0 \end{array} \right\}$

Exercise 5: (1 point) Find the dimensions of a rectangle if its perimeter has a length of 44 m and its area measures 105 m^2

Exercise 6: (2.25 points)

a) $\dfrac{x+5}{x-2} - \dfrac{x-1}{x+2} - \dfrac{x^2-3x}{x^2-4} =$

b) $\dfrac{2x+1}{x-2} = \dfrac{x-1}{x+2}$