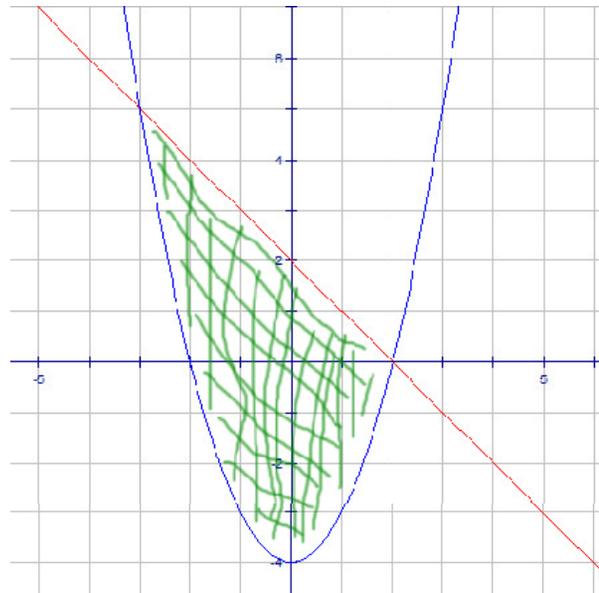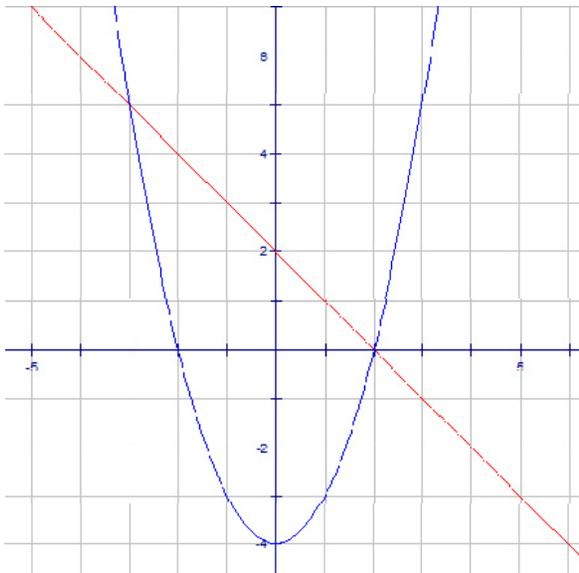Sketch the solution of the following system of inequalities: $y \geq x^2 - 4$
$x + y \leq 2$

- We first graph the two equations:

$$y = x^2 - 4$$
$$x + y = 2$$

- The points that satisfy the system of inequalities must be above or on the parabola but below or on the line. The solution is shaded in green.