

(1) [10 points] Neatly sketch the graph of the function

$$f(x) = \begin{cases} -2x + 3 & \text{if } x < 1 \\ 3x - 2 & \text{if } x \geq 1. \end{cases}$$

and state the domain and range of  $f$  based on your graph.

(2) [5 points]

Sketch the graph of  $h(x) = \sqrt{x - 2}$ .

(3) [5 bonus points] Factor completely:

$$12x^2 - 11x - 15$$