Some homework for section 1.5

For each of the following:

(i) Identify the parent you will use to graph the function

(ii) Express the function you wish to graph in one of the forms \( f(x - c) \), \( f(x + c) \), \( f(x) + c \), \( f(x) - c \)

(iii) State how you will translate the graph of the parent function to graph the given function.

(iv) Sketch the graph

(a) \( y = |x - 2| \)

(b) \( y = \sqrt{x} - 2 \)

(c) \( y = (x+1)^2 \)

(d) \( y = x^2 + 1 \)

(e) \( y = |x - 3| \)

(f) \( y = x - 4 \)

Example: \( y = \sqrt{x+1} \)

(i) \( f(x) = \sqrt{x} \)

(ii) \( y = f(x+1) \)

(iii) Shift the graph of \( f(x) = \sqrt{x} \) one unit to the left

(iv)