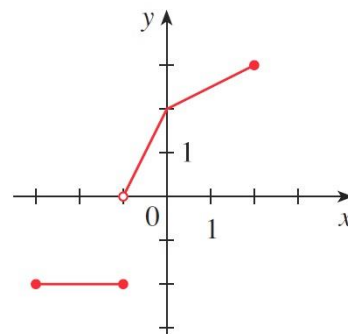1. (2 points) Find an expression for this function.

2. (2points) Find the domain of the function: $\phi(x) = \sqrt{\dfrac{x}{\pi - x}}$

3. (2 points) Find the functions $f \circ g$, $f \circ f$ and their domains.

$$f(x) = \dfrac{1}{x - 1}, \quad g(x) = \dfrac{x - 1}{x + 1}$$

4. (2 points) Find the domain and sketch the function $h(x) = \sqrt{x^2 - 4}$

5. (2 points) Starting from the graph of $y = \sqrt[3]{x}$,

Sketch the graph of (a) $y = \sqrt[3]{x+2}$

and (b) $y = \sqrt[3]{x+2}$ - 1