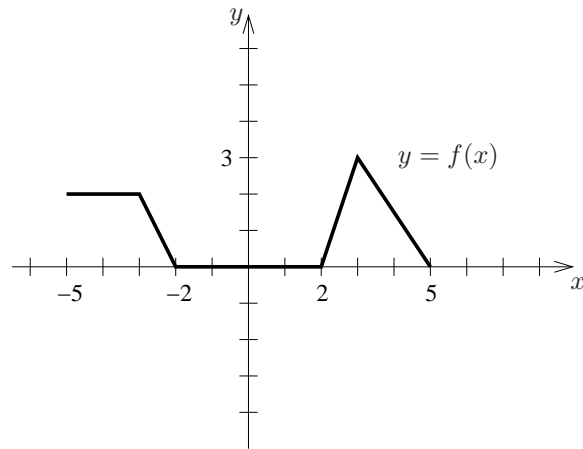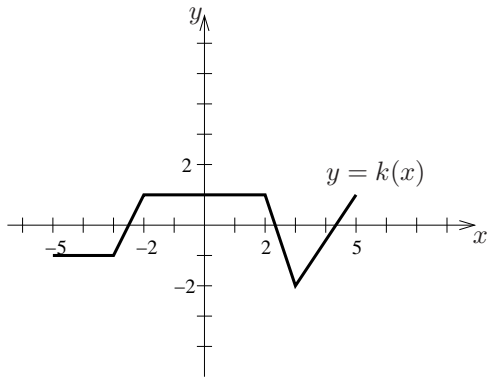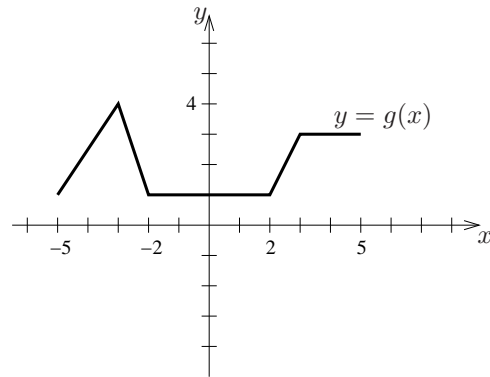3. (12 points) The graph of $y = f(x)$ is given by the figure below.
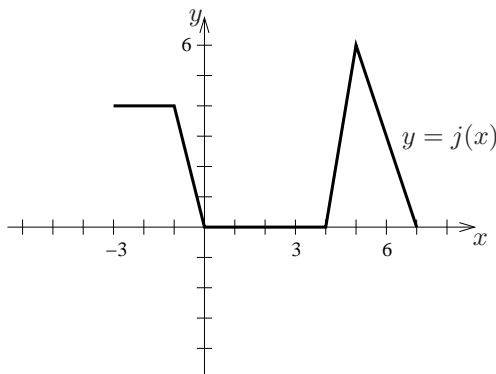

The graphs of the following functions are related to the graph of f. Determine a formula for each graph in terms of the function f.
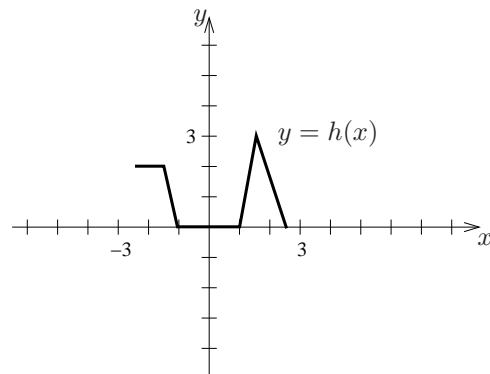

$$k(x) = \qquad -f(x) + 1$$

$$g(x) = \qquad f(-x) + 1$$

$$j(x) = \qquad 2f(x-2)$$

$$h(x) = \qquad f(2x)$$