8. [8 points]

a. [5 points] The function $h(x)$, with domain $-3 \le x \le 2$, has the table of values shown below. Also, $h(x)$ is linear between each consecutive pair of points in the table.

x	-3	-1	0	2
$h(x)$	-4	0	-2	3

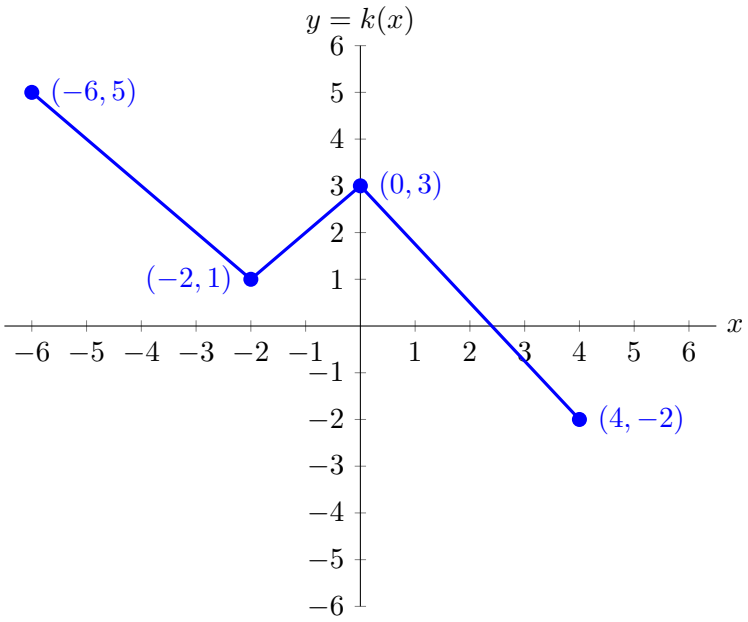
Consider the function

$$k(x) = -h\left(\frac{1}{2}x\right) + 1.$$

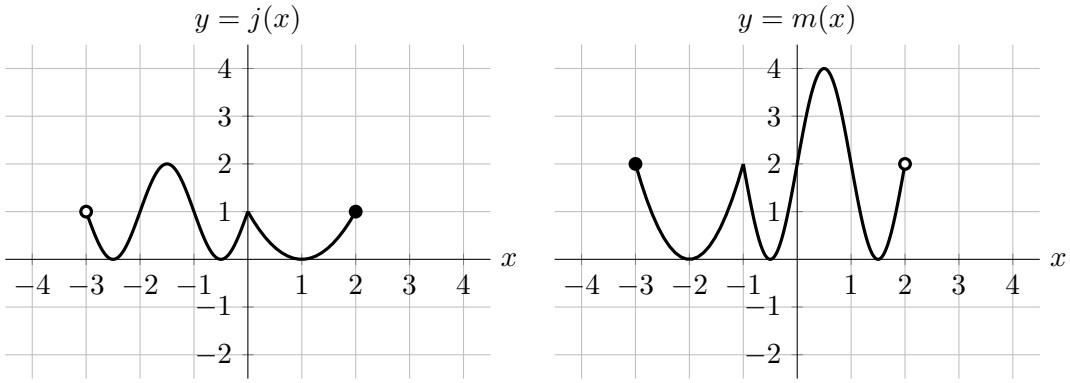
Find the domain and range of $k(x)$, and then carefully sketch the entire graph of $k(x)$ on the given axes. Make your graph large and unambiguous, and be sure that the coordinates of important points are clear.

Domain: $-6 \le x \le 4$

Range: $-2 \le y \le 5$



b. [3 points] Below is the graph of a function $j(x)$. Also shown is the graph of $m(x)$, which was obtained from $j(x)$ through one or more transformations. Find a formula for $m(x)$ in terms of the function $j(x)$.



Answer: $m(x) =$ $2j(-(x+1))$

