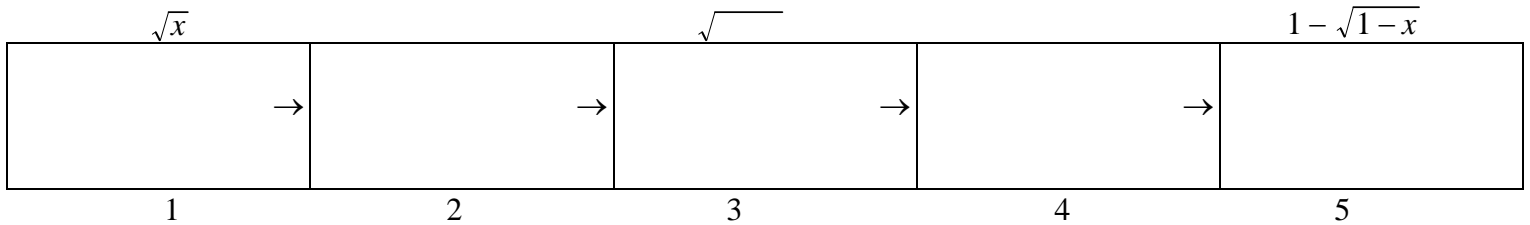


13. Graph $1 - \sqrt{1-x}$.

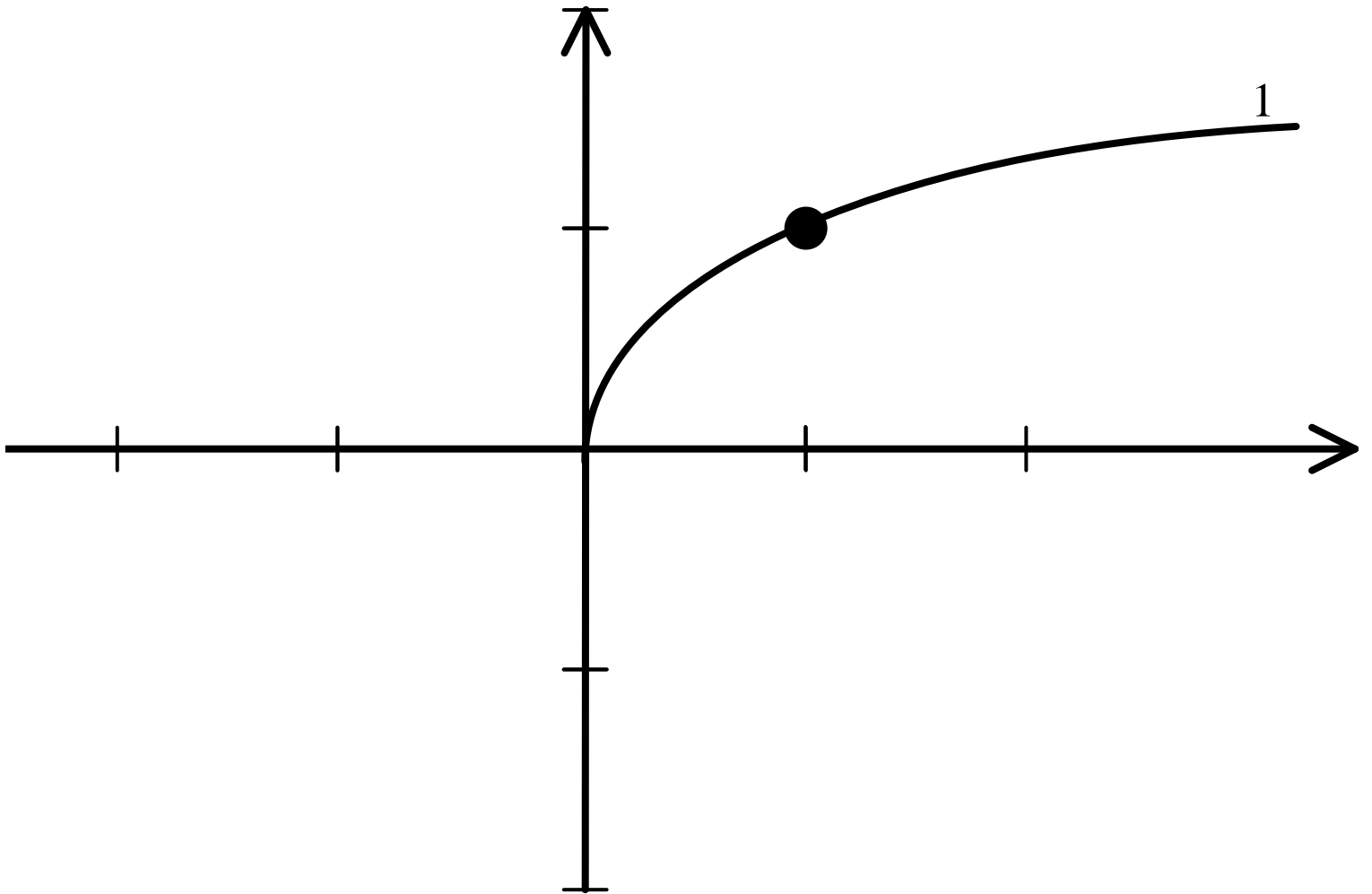
Factor out the “-” under the radical (you can’t pull it outside of the radical) _____/1

$$1 - \sqrt{\quad}$$

Start with the radical in the middle, work backward to \sqrt{x} and work forward to $1 - \sqrt{1-x}$ _____/1



Start with the graph (1) of \sqrt{x} and apply the shifts and reflections needed to get the graph (5) of $1 - \sqrt{1-x}$. _____/1



Math 140 Classwork 5 Example for the problem on the previous page.

13. Graph $1 - |2 - x|$.

Factor out the “-” under the radical (you can’t pull it outside of the radical)

$$1 - |2 - x| = 1 - | -x + 2| = 1 - | -(x - 2)|$$

Start with the radical in the middle, work backward to $|x|$ and work forward to $1 - | -(x - 2)|$

$$\begin{array}{cccccc}
 1 & & 2 & & 3 & & 4 & & 5 \\
 |x| \rightarrow & |-x| & \rightarrow & |-(x-2)| = |2-x| & \rightarrow & -|2-x| & \rightarrow & 1 - |2-x| \\
 \text{hor. reflection} & & \text{right 2} & & \text{vert. reflection} & & \text{up 1} & &
 \end{array}$$

Start with the graph (1) of \sqrt{x} and apply the shifts and reflections needed to get the graph $1 - |2 - x|$.

