For each problem, sketch a graph that fits ALL of the properties given.

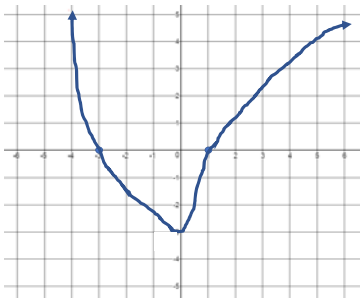
(Your graph may not look just like your neighbors'; that's part of the point of this exercise.)

Once your graph is drawn, label the rest of the properties according to the graph you drew.

See the mini-example to the right.

Example:

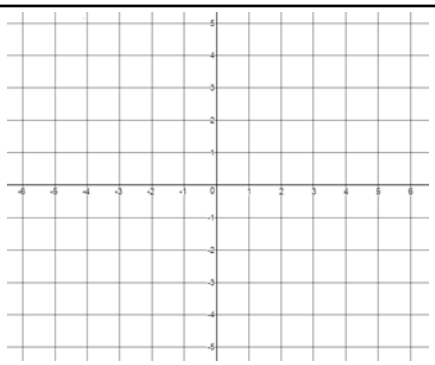
- X-intercept(s): -3 and 1
- Y-intercept: -3
- Increasing interval(s): $(0, \infty)$
- Decreasing interval(s): $(-\infty, 0)$
- Relative max/min: -3
- Absolute max/min: min value -3
- Symmetry (if any): none



#1

- X-intercept(s): 4 and -2
- Y-intercept: 4
- Increasing interval(s):
- Decreasing interval(s):
- Relative max/min: max@(1, 5)
- Absolute max/min:
- Symmetry (if any) through x = 1

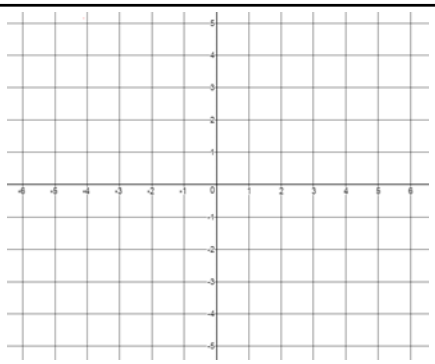
#1



#2

- X-intercept(s):
- Y-intercept: 5
- Increasing interval(s): $(-\infty, -1)$
- Decreasing interval(s): $(2, +\infty)$
- Relative max/min:
- Absolute max/min:
- Symmetry (if any)

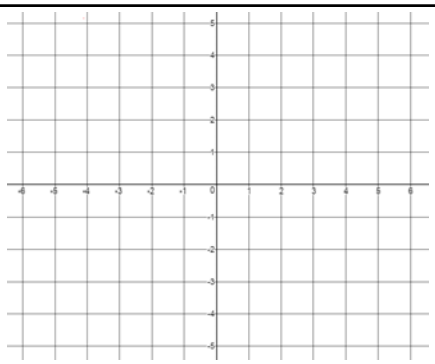
#2



#3

- X-intercept(s): -2 and 4
- Y-intercept:
- Increasing interval(s):
- Decreasing interval(s):
- Relative max/min: max at (1, 4)
- Absolute max/min:
- Symmetry (if any) through x = 1

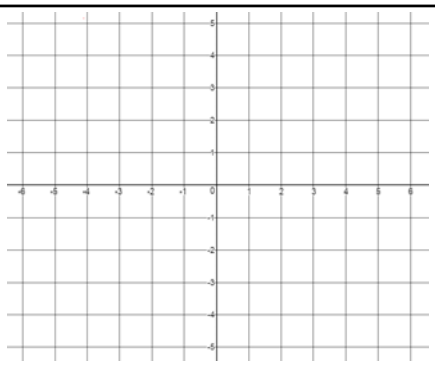
#3



#4

- X-intercept(s):
- Y-intercept: 0
- Increasing interval(s):
- Decreasing interval(s):
- Relative max/min: max at 2, min at -2
- Absolute max/min:
- Symmetry (if any) origin

#4



#5

- X-intercept(s):
- Y-intercept:
- Increasing interval(s):
- Decreasing interval(s):
- Relative max/min: max at (2, 4), min at (-2, -2)
- Absolute max/min: none
- Symmetry (if any) (bonus point if you can make it have symmetry)

#5