Math-19 Section 1

Homework #4

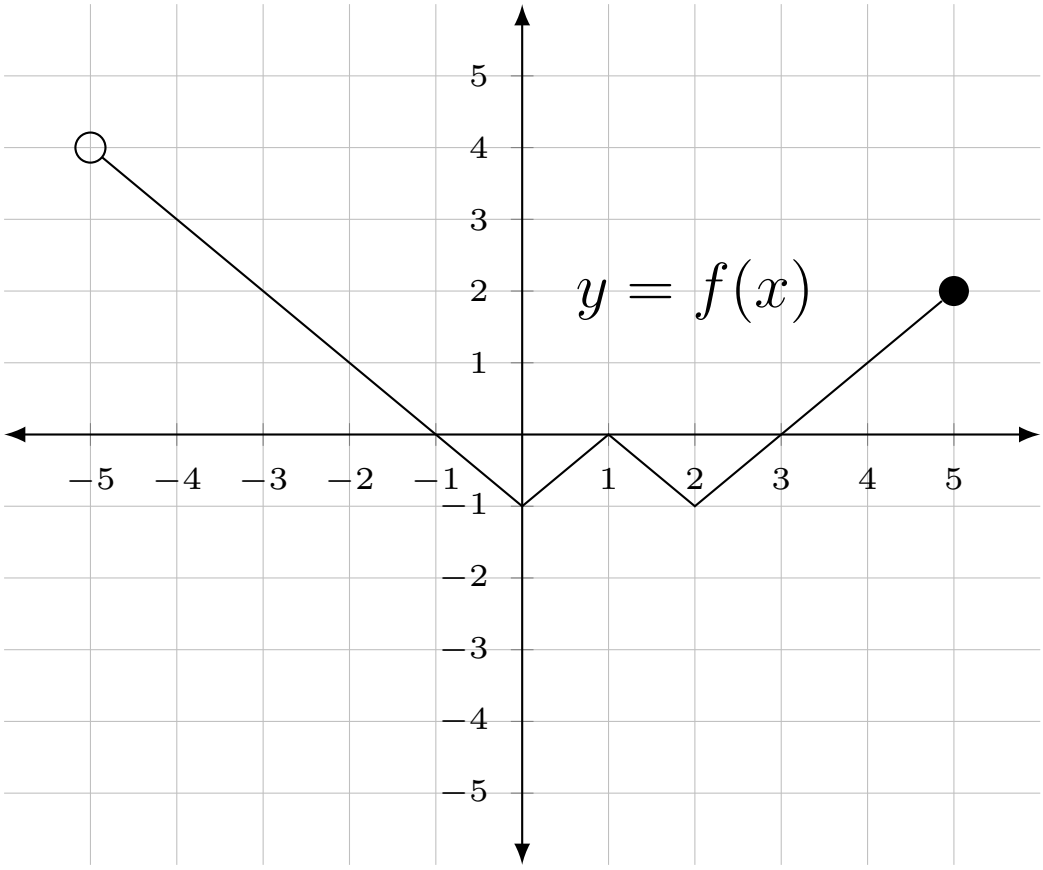
Due: 7/1/2019 9:00am

Reading

Sections 2.1–2.6

Problems

1. Use the graph of $y = f(x)$ to answer the following questions:



(a) What is $f(2)$?

(b) What is the y-intercept?

(c) For what values of x is $f(x) = 0$?

(d) What is the domain of f, in interval notation?

(e) What is the range of f, in interval notation?

(f) On what intervals is f increasing?

(g) On what intervals is f decreasing?

(h) What are the local minima (if any)?

(i) What are the local maxima (if any)?

(j) What is the absolute maximum (if any)?

2. Consider the function: $y = -2|x - 2| + 3$

(a) List the starting standard function and the four transformation steps in the order that they should be applied.

(b) What are the x-intercepts (if any)?

(c) What are the y-intercepts (if any)?

(d) What are the local maxima (if any)?

(e) What are the local minima (if any)?

(f) What is the domain?

(g) What is the range?

(h) What is the axis of symmetry?

(i) Sketch the graph of the function. Be sure to label all important points.