

Homework 6

Problem 1 is similar to Problems 1-15 on page 183. Problem 2 is similar to Problems 22-33 on page 183.

1. Solve the equation

(a) $|2x + 3| = 7$.

(b) $|x| = |3x + 2|$.

2. Let $f(x) = |x + 2| - |2x - 1|$.

(a) Find the x - and y -intercepts if any exist.

(b) Graph the function.

(c) Determine the domain and range.

(d) List the intervals on which the function is increasing, decreasing, or constant.

(e) Find the local minimum (the “valleys”) and local maximum (the “peaks”) if they exist.