

# Assignment 2 (9/30)

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**Note:** Although I don't expect all of you to start writing proofs using full sentences and lots of words (at least not immediately); the following is the bare minimum that I expect:

- The lines should be connected by either words or symbols (e.g. “ $\implies$ ”, “ $\therefore$ ” etc.)

## Problem 1

Problem 1.2.76.

## Problem 2

Problems 1.3.(43, 45).

## Problem 3

Problems 1.5.(30, 42, 73, 74).

## Problem 4

Problems 1.6.(33, 58, 67).

## Problem 5

Let  $P(x) = x^2(x+1)^3(x-1)^2(x-3)^5$ . Sketch the graph of  $P(x)$ .

## Problem 6

Solve the inequality and express the solution set as an interval or as a union of intervals:

$$4 \leq |x - 3| < 6$$