Assignment 3 (9/30)

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Problem 1

Problem 2.6.$(6, 10, 25, 27)$.

Problem 2

Just draw a picture for these problems. You don't have to give a formula for f. Problems 2.6.$(13 - 24)$.

Problem 3

Problems 4.1.$(15, 19, 23, 32, 45)$.

Problem 4

Let $f : [1, 5] \to \mathbb{R}$ be a continuous function. Show that there exists some $c \in [1, 5]$ such that

$$f(c) = \frac{2f(1) + 7f(5)}{9}$$

Problem 5

Show that the equation $2x^3 - x^2 + x - 1 = 0$ has exactly one real root.