

Writing Assignment #2

The assignment should be a 1-2 page narrative. It should be typed, double spaced, 1" margins, font-size 12pts. A separate cover page is not required. Spelling, grammar and syntax should be appropriate to the subject. The assignment is due Wednesday, 10 November, 5:00 pm. The writing assignment will be returned with comments to you on Monday, 15 November, for revision. The revised version will be due Friday, 19 November, 5:00 pm.

The subject for the assignment is:

Show that the set of functions

$$\mathbb{R}[x] = \{f: \mathbb{R} \rightarrow \mathbb{R} \mid f \text{ is a polynomial in } x \text{ with real coefficients}\}$$

with operations polynomial addition and polynomial multiplication is a commutative ring with unity.

Furthermore, show that $S = \{f \in \mathbb{R}[x] : f(6) = 0\}$ is a subring of $\mathbb{R}[x]$ and that

$T = \{f \in \mathbb{R}[x] : f(0) = 6\}$ is not a subring of $\mathbb{R}[x]$.