

Name _____ Fields and Rings, Quiz 5

1) Show that $\mathbb{Z}[x]/\langle x - \sqrt{3} \rangle \cong \mathbb{Z}[\sqrt{3}]$.

2) Solve the system of congruencies below. No need to simplify your answer.

$$x \equiv 2 \pmod{3}$$

$$x \equiv 7 \pmod{10}$$

$$x \equiv 4 \pmod{11}$$

$$x \equiv 40 \pmod{49}$$