

Name: _____

Read and take notes on Section 1.6, The Integers mod m .

Reading Questions

1. Make sure you are familiar with the definitions and notation introduced in this section, especially for the following terms: congruence modulo a nonzero integer m , the integers modulo m , congruence/residue class.

2. True or false (with reasons).

(a) $\mathbb{Z}/5 = \{0, 1, 2, 3, 4\}$.

(b) $\mathbb{Z}/5 = \{\bar{5}, \bar{6}, \bar{7}, \bar{8}, \bar{9}\}$.

(c) $(\mathbb{Z}/5)^\times = \{\bar{1}, \bar{2}, \bar{3}, \bar{4}\}$

3. Use a result in this section (a proposition or corollary) to explain the following hand computation:

$$((24 + 17 * 11) * 3981) \% 10 = (4 + 7) \% 10 = 1$$

4. Try exercises 1.6.03, 1.6.04, and 1.6.05.

5. What struck you in this reading? What is still unclear? What remaining questions do you have?