

Section 1 Lecture 4 – Modular Arithmetic 2 - Exercises

Q1) What are the following?

- (i) $-14 \pmod{6}$
- (ii) $-12 \pmod{5}$
- (iii) $-27 \pmod{7}$
- (iv) $-24 \pmod{5}$
- (v) $-101 \pmod{10}$
- (vi) $-6 \pmod{3}$
- (vii) $-6 \pmod{6}$
- (viii) $-99 \pmod{9}$
- (ix) $-3 \pmod{5}$

Q2) What are the letters corresponding to the following?

- (i) $-5 \pmod{26}$
- (ii) $-26 \pmod{26}$
- (iii) $-25 \pmod{26}$
- (iv) $-48 \pmod{26}$
- (v) $0 \pmod{26}$

Q3) *Optional question if you are interested!*

Could you define modular arithmetic outside the positive integers, such as $\pmod{5.7}$ or $\pmod{-2.4}$? Would this be useful?