

## MATH1050 Guided Study Exercise 3 (Answers)

### 1. Answer.

- (a) 1, 2.
- (b) 0, 1.
- (c) It is the empty set.
- (d) 1, 2.
- (e) 2, 3, 4.
- (f) 2.
- (g) 0, 1, 2, 3, 4.
- (h) 1, 2.
- (i) 2, 3, 4.

### 2. Answer.

- (a)  $\alpha = -1$ .
- (b)  $\beta = 1, \gamma = \frac{5}{4}$ .
- (c)  $\delta = -1, \varepsilon = \frac{5}{3}$ .
- (d)  $\zeta = -\sqrt{2} + 1, \eta = \sqrt{2} + 1$ .
- (e)  $\theta = -\sqrt{2} + 1, \kappa = -\frac{\sqrt{5}}{2} + 1, \lambda = \frac{\sqrt{5}}{2} + 1, \mu = \sqrt{2} + 1$ .
- (f)  $\nu = -\frac{1}{\sqrt{2}} + 1, \xi = \frac{1}{\sqrt{2}} + 1$ .
- (g)  $\rho = -\frac{1}{\sqrt{2}} + 1, \sigma = \frac{1}{\sqrt{2}} + 1$ .
- (h)  $\tau = -\sqrt{2} + 1, \varphi = -\frac{1}{\sqrt{2}} + 1, \psi = \frac{1}{\sqrt{2}} + 1, \omega = \sqrt{2} + 1$ .

### 3. Answer.

- (a)  $\alpha = 0, \beta = 3, \gamma = 1, \delta = -1$ .
- (b)  $\varepsilon = -2, \zeta = -0.25, \eta = -1, \theta = 0, \kappa = 1$ .

### 4. Answer.

- (a)  $a = 2, b = 3$ .
- (b) 1, 4.
- (c)  $\alpha = 0, \beta = 1, \gamma = 2, \delta = 4$ .