

EXAM 2 ANSWERS, FALL 2010

PART I

VERSION A

1. a
2. c
3. d
4. d
5. b

6. c
7. e
8. b
9. e
10. a

11. c
12. e
13. b
14. b

VERSION B

1. b
2. d
3. c
4. a
5. c

6. a
7. d
8. e
9. b
10. c

11. a
12. b
13. e
14. d

PART II

$$\begin{aligned} 1. \quad & \text{(a) } g^{-1}(x) = \frac{-x}{4x-1} \\ & \text{(b) } f^{-1}(-2) = 1 \\ & \text{(c) } -\frac{1}{3} \end{aligned}$$

$$2. \quad -\frac{1}{13} + \frac{8}{13}i$$

$$\begin{aligned} 3. \quad & \text{(a) Proof} \\ & \text{(b) } \pm i, 1, -3 \end{aligned}$$

$$\begin{aligned} 4. \quad & \text{(a) } 1) x \neq -1 \\ & \quad 2) x = -1 \\ & \quad 3) y = 1 \\ & \quad 4) x = \frac{1}{3} \\ & \quad 5) x = 1, 3; y = 3 \\ & \text{(b) Graph} \end{aligned}$$

$$\begin{aligned} 4. \quad & \text{(a) } p = -\frac{2}{5}x + 80 \\ & \text{(b) } R = -\frac{2}{5}x^2 + 80x \\ & \text{(c) } \$4000 \end{aligned}$$

$$\begin{aligned} 1. \quad & \text{(a) } g^{-1}(x) = \frac{-x}{3x-1} \\ & \text{(b) } f^{-1}(-1) = 2 \\ & \text{(c) } -\frac{2}{5} \end{aligned}$$

$$2. \quad -\frac{4}{13} - \frac{7}{13}i$$

$$\begin{aligned} 3. \quad & \text{(a) Proof} \\ & \text{(b) } \pm i, -1, 4 \end{aligned}$$

$$\begin{aligned} 4. \quad & \text{(a) } 1) x \neq 2 \\ & \quad 2) x = 2 \\ & \quad 3) y = 1 \\ & \quad 4) x = \frac{6}{5} \\ & \quad 5) x = -2, 1; y = -\frac{1}{2} \\ & \text{(b) Graph} \end{aligned}$$

$$\begin{aligned} 4. \quad & \text{(a) } p = -\frac{3}{5}x + 120 \\ & \text{(b) } R = -\frac{3}{5}x^2 + 120x \\ & \text{(c) } \$6000 \end{aligned}$$