

Math 1550 Answers to Homework—Even numbered problems

Chapter 3

- §3.1 12.  $y - 5 = \frac{1}{3}(x\frac{5}{2})$ ; 14.  $y - 2 = -\frac{1}{6}(x - 5)$ ; 54.  $y + 4 = 2(x - 3)$ ; 56.  $x = 1$   
§3.2 8.  $f(x) = -2x + 3$ ; 10.  $f(x) = -2x - \frac{31}{5}$ ; 16.  $p = -\frac{1}{2000}q + 29$ ; 18.  $p = \frac{1}{3}q + \frac{55}{3}$ ;  
20.  $C = \frac{3}{100}x + 76$ ; 24.  $v = -120x + 820$ ; 30. (b)  $-\frac{2}{3}$ , (c)  $-\frac{2}{3}$ , (d) Yes.  
§3.3 12. (a) 3, (b)  $-1, \frac{3}{2}$ , (c)  $(\frac{1}{4}, \frac{25}{8})$ ; 28.  $q = 944, p = 401.39$ ; 30. 400;  
§3.4 14.  $y = r, x = \frac{3}{5}r + \frac{2}{5}$ ; 16.  $x = 1, y = 0, z = -2$ ; 20.  $z = r, y = -\frac{3}{2}r + \frac{1}{2}, x = \frac{4}{3}r$ ;  
22.  $y = r, z = s, x = 2r + s$ ; 24.  $x = 3, z = r, y = 2 - r$ ; 26. 5 pounds of 3% and 15 pounds of  
11%; 28. federal tax \$7200 and state tax \$2400  
§3.5 2.  $x = y = 0, x = y = 1, x = y = -1$ ; 12.  $x = 2, y = 1; x = 3, y = 4$ ;  
16. (10, 14.12), (5, 9.56)  
§3.6 6. (6, 256); 8. (76.84, 25.21); 12.  $q = 4000$ ; 14.  $q = 50$ ; 16. (a)  $q = 800$ , (b)  $q = 1200$ .

Chapter 4:

- §4.1 20. 13266.49; 24. 2667.43; 26. 854.07; 28. (a) 1180.49, (b) 1121.56; 30. (a)  $P = 5000(1.03)^t$ , (b)  $P = 5463.64$ ; 34. 8589; 48. 49.66;  
§4.2 42.  $x = 3$ ; 44.  $x = 3$ ; 46.  $x = -\frac{17}{9}$ ; 48.  $x = 3$ ; 58.  $c = 18 \ln 6 + 12 = 44.25$ ;  
§4.3 46.  $x = \frac{3}{2}$ ; 48.  $x = 2$ ;  
§4.4 6.  $x = 2$ ; 44.  $t = 6.94$  seven years;

Chapter 5:

- §5.3 2. -54; 4. 3; 6.  $\frac{1365}{1024}$ ; 8.  $10(1 - 1.1^{-6})$ .