1. 9

2. $-\frac{4}{3} < x < \frac{5}{3}$

3. 16

4. $41

5. $x < 35$

6. $x = 4, x = \frac{16}{3}$

7. x–intercept (–2, 0)
y–intercept (0, 3/2)

8. $3\sqrt{10} \approx 9.49$

9. skip ordered pairs that represent a function
{(–8,3),(3,–8), (8,8)}

10. increasing$(-\infty, -1)$
decreasing $(-1, \infty)$

11. quadrant III

12. $x \le -\frac{1}{3}$

13. $x = -0.42$

14. $(x-3)^2 + (y-3)^2 = 36$

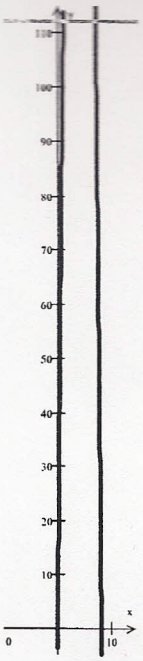
15. $x \ge \frac{5}{11}$

16. $2x - 7y + 18.2 = 0$
(30.1, 11.2),
(–39.9, –8.8)

17. $(f+g)(x) = \frac{1+x^3}{x^2}$

18. $y = \frac{3}{2}x - \frac{3}{4}$; $m = \frac{3}{2}$;
y–intercept $\left(0, -\frac{3}{4}\right)$

19. between 1 and 7 seconds

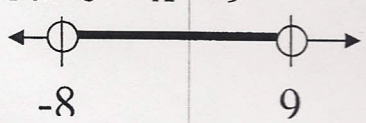


20. even/odd/neither
Neither :
$f(x) = x^6 + 4x + 4 + |x-2|$

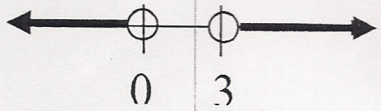
21. Domain $(-\infty,\infty)$
Range $(-\infty, -8)$

22. $0 \le x \le 8$

23. $-8 < x < 9$



24. $x < 0$ or $x > 3$



25. (3, –13), (2, –4)

26. all real except $x \neq 3$, $x \neq -4$

27. 34

28. $y = 5x + 50$

29. $x = \frac{15}{4}, x = -\frac{55}{4}$

30. D: decrease (0,2)
Increase $(-\infty,0),(2,\infty)$

31. center (4.5, –4)

32.
$(f \circ h)(x) = (x^2+2)^2$
$= x^4 + 4x^2 + 4$

33. $(f \circ g)(x) = 4|x|$

34. $4x - 7y + 14 = 0$

35. $\pm 4, -5$

36. perpendicular

37. $f^{-1}(x) = \frac{4x+2}{-3x-1}$

38. $\pm 2, \pm 1$

39. $f(6) = 72 - 3\sqrt{6}$
≈ 64.65153077

Review Chapter 2

① $f(x) = 2(x-4)^2 - 37$ Vertex $(4, -37)$

② down and down ③ B ④ A

⑤ $x = 0, \pm 5$ ⑥ $g^2 - 6g + 36$

⑦ $-3x^2 + x + 3 - \frac{7}{2x-4}$

⑧ Possible zeros: $\pm 1, \pm 2, \pm 4, \pm 5, \pm 10, \pm 20$

Actual zeros: $1, 4, 5$

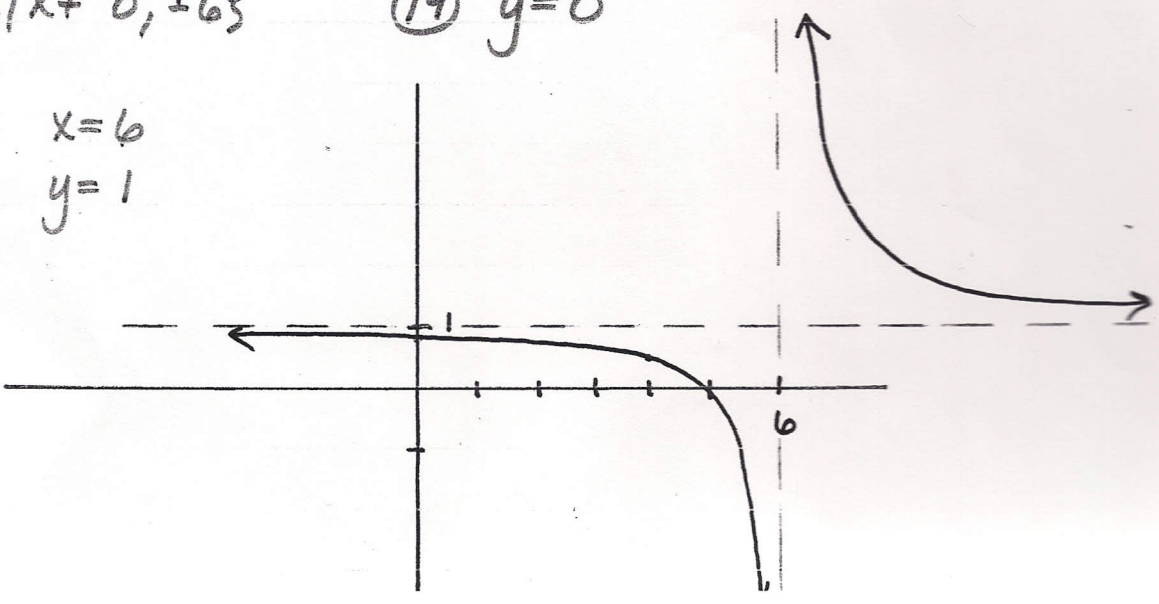
⑨ $i\sqrt{66}$ ⑩ $\frac{19}{29} + \frac{4i}{29}$ ⑪ $\frac{-7}{74} + \frac{69i}{74}$

⑫ $8+4i$ ⑬ -1 ⑭ $\frac{-5 \pm i\sqrt{23}}{8}$

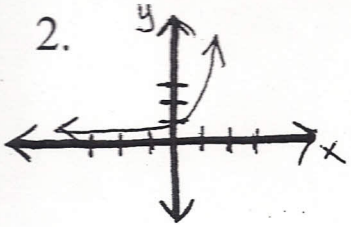
⑮ $x^3 + 10x^2 + 34x + 40$ ⑯ $-1-2i$ ⑰ $\pm 2, \ 1 \pm i$

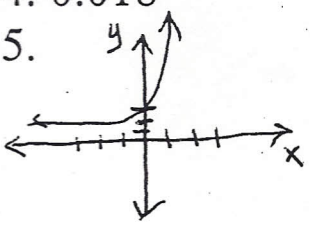
⑱ $\{x \mid x \neq 0, \pm 6\}$ ⑲ $y = 0$

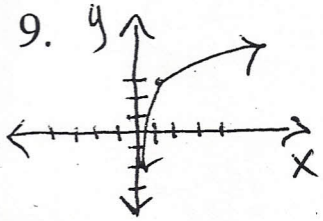
⑳ v.a. $x = 6$
h.a. $y = 1$



Math Analysis Review Chapters 3

1. 530.33
2. 

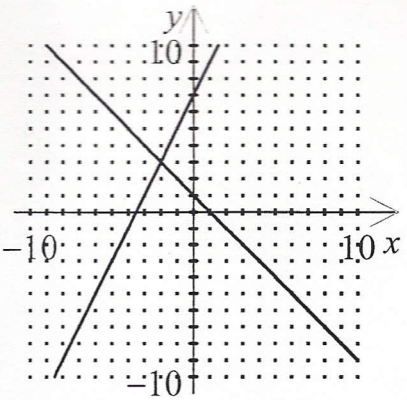
3. 4.333
4. 0.018
5. 

6. 229
7. 2
8. $27^{4/3}=81$
9. 

10. 1/3
11. 11,332 units
12. $\frac{1}{2}(\log_b 27-\log_b 77)$
13. $2/3\log_b x+7/3\log_b y-3\log_b z$
14. 1
15 -3
16. 26.482
17. -32.432
18. 5.4 years
19. 5.13 hours
20. 1360
21. 25.2 minsA

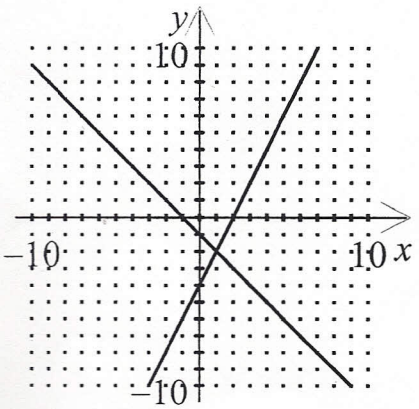
Math Analysis Chapter 7 Review for Final

1. 7.1 hours
2. (1, –7)
3. (9, –4)
4. (–4.71, 3.2, 1.5)

5. 

Consistent, one solution (–2, 3)

6. (–9, –3)
7. (0, –5)
8. $\left(-\frac{1}{12}, \frac{1}{2}, -1\right)$

9. 

(1, –2)

10. 6 cm × 4 cm
11. $\left(-\frac{38}{17}, \frac{61}{17}\right)$
12. $\begin{bmatrix} 19 & -54 & 35 \\ 10 & -22 & 23 \\ -19 & 4 & -56 \end{bmatrix}$
13. 3 × 3
14. $\begin{bmatrix} 4 & 0 \\ 1 & -4 \end{bmatrix}$
15. $\begin{bmatrix} 1 & -16 & 4 \\ 27 & 38 & -30 \\ 10 & 1 & -8 \end{bmatrix}$
16. 13
17. t = 1, x = 14, y = 10, z = –2
18. $\begin{bmatrix} -\frac{5}{22} & -\frac{2}{11} \\ -\frac{3}{22} & \frac{1}{11} \end{bmatrix}$
19. $\begin{bmatrix} \frac{5}{17} & \frac{2}{17} \\ \frac{1}{17} & -\frac{3}{17} \end{bmatrix}$
20. $\begin{bmatrix} \frac{292}{15} & \frac{76}{21} \\ -\frac{97}{24} & \frac{146}{45} \end{bmatrix}$
21. (a) $-7x^2 - 12$

(b) $49x^2 - 28x + 6$