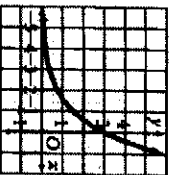


Chapter 7: Form A

- | | |
|-----------------------------|--|
| 1. $20xy^3$ | 28. $x^2+5/x-7$; all real #'s except 7 |
| 3. $3x^2y^2-4/xy$ | 29. $x^2-2x+19$; all real #'s |
| 5. $5s^2t^2-2$ | 30. $x^3-7x^2+5x-35$; all real #'s |
| 7. $10x/y^2$ | 31. $3x^2+8$; $9x^2+30x+26$ |
| 9. $5-\sqrt{3}/22$ | 32. $4x^2-10x+2$; $2x^2-10x+4$ |
| 11. $2\sqrt{7}$ | 33. $\sqrt{10x+5}$; $5\sqrt{2x-1}+3$ |
| 13. $-2+2\sqrt{2}$ | 34. $-2x^2-16x-32$; $-2x^2+4$ |
| 15. $\sqrt{15}-15\sqrt{30}$ | 39. Domain: $x \geq 1$; Range: $y \geq 2$ |
| 17. $1/16$ | 41. Domain: $x \geq 0$; Range: $y \geq 3$ |
| 19. $x/2y^2$ | 43. 80 |
| 21. $S^{10}t^3s^6t^6$ | 45. 15 |
| 23. 2 | 47. -9 |
| 25. 13 | 49. $f^{-1}(x)=+\sqrt{x+4}-2$; not a function |
| 27. -9, 7 | 51. $f^{-1}(x)=x^2-4$; function |
| | 53. $f^{-1}(x)=+\sqrt{x+5}$; not a function |

Chapter 8: Form A

1



19.

21. $\log_7 343 = 3$

23. $\log_2 0.0625 = -4$

25. $\log 1/b$

27. $\log_5 6 + \log_5 x$

29. $2 \log_5 x + \log_5 y - 4 \log_5 x$

31. $\ln a^5 b^3$

33. 1

35. 2

37. 2

39. Answers vary

e.x. $8x = 1/2$, $x = -1/3$

41. 1.26

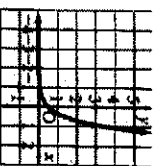
43. 13.86

45. 530

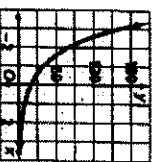
47. $\log 5 / \log 2$

49. 5.72

2.



3.



4. Answers may vary

8. \$2754.26

9. The graph of $y = -2^{x+1} + 1$ is the graph of $y = 2^x$ reflected across the x-axis and shifted up 1 unit

11. The graph of $y = 5^{x+1} - 2$ is the graph of $y = 5^x$ shifted left 1 unit and down 2 units.

13. 2

15. $-1/2$

17. $-8/3$

Chapter 9: Form B

7. vertical asymptote, $x=-4$;

17. $x^2+7x-12/(x+4)(x-4)$

horizontal asymptote, $y=2$

18. $7x-3/2(x+3)(x-3)$

8. hole at $x=4$; vertical asymptote,

19. 1

 $x=-9$; horizontal asymptote, $y=0$

20. $2xy-y/3xy+x$

9. vertical asymptotes, $x=4$ and $x=-4$;

21. 1

horizontal asymptote, $y=0$

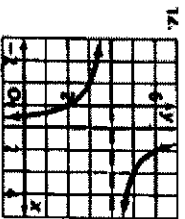
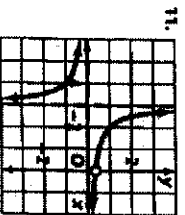
22. -2, 6

10. vertical asymptote, $x=-2$;

23. 0

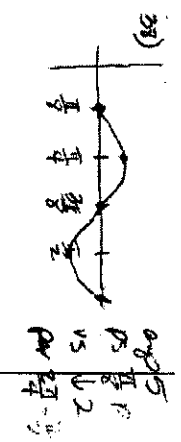
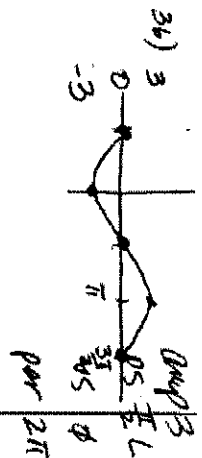
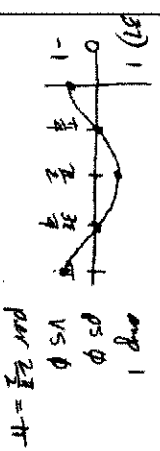
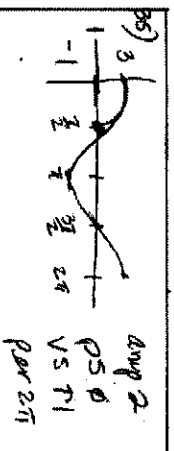
horizontal asymptote, $y=3$

24. 4

13. $-x/2$; $x \neq 7$ 14. $8/3$; $x \neq 7$ or 5

Trig Review

1. $\cos 210^\circ = -\frac{\sqrt{3}}{2}$
 $\sin 210^\circ = -\frac{1}{2}$
 $\tan 210^\circ = \frac{1}{\sqrt{3}}$
2. $\cos 135^\circ = -\frac{1}{\sqrt{2}}$
 $\sin 135^\circ = \frac{1}{\sqrt{2}}$
 $\tan 135^\circ = -1$
3. $\cos \frac{5\pi}{3} = \frac{1}{2}$
 $\sin \frac{5\pi}{3} = -\frac{\sqrt{3}}{2}$
 $\tan \frac{5\pi}{3} = -\sqrt{3}$
4. $\cos \frac{\pi}{6} = \frac{\sqrt{3}}{2}$
 $\sin \frac{\pi}{6} = \frac{1}{2}$
 $\tan \frac{\pi}{6} = \frac{1}{\sqrt{3}}$
5. $\frac{7\pi}{4}$
6. 150°
7. 135°
8. $\frac{20\pi}{9}$
9. 20°
10. $\frac{3\pi}{2}$
11. 240°
12. $\frac{3\pi}{4}$
13. II
14. III
15. III
16. IV
17. 258, -462
18. 73, -287
19. $\frac{20\pi}{9}$ $-\frac{16\pi}{9}$
20. $\frac{9\pi}{4}$ $-\frac{7\pi}{4}$
21. $\frac{1}{\sqrt{2}}$
22. $-\frac{\sqrt{3}}{2}$
23. $-\sqrt{3}$
24. $-\frac{1}{\sqrt{2}}$
25. $\frac{12}{13}$
26. $\frac{13}{12}$
27. $\frac{13}{5}$
28. $\frac{5}{12}$
29. $\frac{4}{5}$
30. $\frac{3}{5}$
31. $\frac{4}{3}$
32. $\frac{5}{4}$
33. $\frac{5}{3}$
34. $\frac{3}{4}$



39. $J = 70, b = 2.18, o = 6.39$

40. 27.58 sq units

41. 64.1

42. 3282.2 m

43. $S = 31.95$

44. $b = 16.36$

45. $V = 37.04$

46. $x = 7.05 \text{ in}, y = 6.53 \text{ in}$

Probability and Stats Review - Spring Final Exam - NON CALCULATOR

1) $\frac{16\pi}{576} = \frac{\pi}{36}$

2) $\frac{20\pi}{576} = \frac{5\pi}{144}$

3) $\frac{28\pi}{576} = \frac{7\pi}{144}$

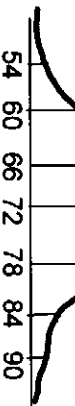
4) $\frac{4}{7}$

5) 1

6) $\frac{2}{7}$

7) 0

8)



9) 66 - 78

10) 97.5%

11) $\frac{40}{62} = \frac{20}{31}$

12) $\frac{32}{120} = \frac{4}{15}$

13) $\frac{22}{32} = \frac{11}{16}$

14) $\frac{10}{120} = \frac{1}{12}$

15) $\frac{8}{15}$

Probability and Stats Review - Spring Final Exam - CALCULATOR

16) $\frac{6}{2197} = 0.3\%$

17) $\frac{1}{24} = 4.2\%$

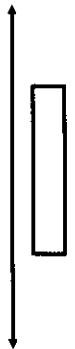
18) $\frac{1}{204} = 0.5\%$

19) $\frac{5}{18} = 27.8\%$

20) $\frac{14}{19} = 73.7\%$

21) $\frac{4}{13} = 30.8\%$

- 22) Q1 = 4.5
 Q3 = 13.5
 Med = 10
 Mean = 11.36
 Mode = 3
 SD = 8.52
 InterQrange = 9
 40th %tile = 15



- 23) Q1 = 43.4
 Q3 = 50
 Med = 47.35
 Mean = 46.94
 Mode = none
 SD = 3.24
 InterQrange = 6.6
 40th %tile = 46.5



24a) 44.8%

24b) 5%

25a) 1.76

b) -2.79