

Honors Precalculus – Sullivan & Sullivan - Chapter 4

Section	Activities/Resources	Assignment
4.1	Polynomial Division; Synthetic Division (Appendix, Section 4)	1-10 by 3s, 23-32 by 3s, (59, 62 use calculator)
4.1		41, 47, 53, 65, 71, 83, 85, 92
4.2	p. 962 sum & difference of cubes	5-40 by 5s, 45-72 by 3s, 73-76
4.3		1-22 by 3s
4.3	Quiz 4.1 & 4.2	25-33 odd, 35-38
4.4		1, 7, 13, 19, 25, 37, 43, 49, 55
4.4		2, 14, 26, 38, 44, 50, 60, 66, 68, 72, 74, 75
Review		4, 8, 10, 12, 18, 20, 30-38 even, 40, 42, 44, 48, 52, 56, 58, 62, 66
Review		3, 7, 11, 17, 29, 33, 45, 47, 55, 57, 65
5.1	Test Chapter 4	1-14

4.1 4. $(4x^2 + 1)(x + 2)(x - 2)$ 10. $-1/3$ is not a zero 26. $\pm 1, 1/2$ 32. $\pm 1, 3, 1/3$

4.1 92. 6 inches or 12 inches

4.2 10. $-12-9i$ 20. $-1/2+5/2i$ 30. $4-i$ 40. $3i$ 48. $5i, -5i$ 54. $\frac{-3}{10} - \frac{1}{10}i, \frac{-3}{10} + \frac{1}{10}i$ 60. $-3, \frac{3}{2} - \frac{3i\sqrt{3}}{2}, \frac{3}{2} + \frac{3i\sqrt{3}}{2}$

66. 2 unequal real number solutions 72. $4+i$ 74. $6i$ 76. $-5+7i$

4.3 4. $2-i$ 10. $-i, 3+2i, -2-i$ 16. $x^5 - 5x^4 + 11x^3 - 13x^2 + 8x - 2$ 22. $1+3i, 1-3i, -1, 6$

4.3 36. polynomial of degree 5 38. fourth zero must be real

4.4 2. $x < -2$ or $x > 5$ 14. no solution 26. $x < 0$ or $0 < x < 3$ 38. $x < -1$ or $x > 3$ 44. $-\infty < x < 0 \cup 3 < x < 4$ 50. $-7 < x < -1$ or $x > 3$ 60. $x > 2$

66. between 1.59 and 4.41 sec 68. a) at least 30 no more than 40 boxes c) \$125 d) 50 boxes f) \$61.25 g) 35 boxes

72. b) $y = -1.17x^2 + 1870225x - 2486.907$ c) 50,750 and 109,200 gallons d) 80,000 gallons e) \$5,000

Review 4. $\pm 1, 1/2, 1/3, 1/6$ 8. $2, -1/2$ 10. -3 12. $-3.4, -.25, .33$ 18. $-3, 2$ 20. $-3, -2, -1/2$ 30. $2-I$ 32. $-4 + 11i$

34. $\frac{8}{5} + \frac{4}{5}i$ 36. i 38. $-9 - 46i$ 40. $3 - 4i$ 42. $1 - i$ 44. $\frac{1}{2} \pm \frac{i\sqrt{3}}{2}$ 48. $\frac{1}{2} \pm \frac{1}{2}i$ 52. $3i, -3i, -1, 1$ 56. $-2, \pm\sqrt{2}$

58. $x \leq \frac{-1}{3}$ or $x \geq 1$ 62. $\frac{-5}{2} < x \leq \frac{-7}{6}$ 66. a) $x < -5, -4 < x \leq -2$, or $0 \leq x \leq 1$ b) $x < -5, -4 < x \leq -2$, or $0 \leq x \leq 1$

5.2. b) function 4.b) not a function 6. a) $(5, -2), (3, -1), (7, 3), (12, 4)$ b) function 8a) $(2, 1), (8, 2), (18, 3), (32, 4)$ b) function

10. one to one 12. not one to one 14. not one to one