

## Answers to Math 103 Practice Final Exams

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|---|---|
| 1. $x=5/2$                                      | 14. 743.54; population of bass in lake after 12 months is ~ 744 |
| 2. \$147,140.97                                 | 15. \$65,873.50; \$27,473.50                                    |
| 3. 2 cups sugar                                 | 16. \$1,065.15; \$47,727  |
| 4. 0.0401 or 4.01% ; 0.5859 or 58.59%           | 17. 77 mg chol in quarter pounder & 122 mg chol in whopper      |
| 5. 186.6; at age 20, cholesterol level is 186.6 | 18. mode = 3 ; med = 3 ; mean = 2.68 ; st. dev. = 1.2           |
| 6. (2,0); (0,-4); m=2; graph                    | 19. $35/136 \sim 0.26$ ; $21/136 \sim 0.154$                    |
| 7. $\leq 1280$ miles                            | 20. 180.17; 180.17 million cell phone subscribers in 2004       |
| 8. $3^5 = 243$ ways                             | 21. $x = -1, \frac{2}{5}$                                       |
| 9. scatter plot, positive linear correlation    | 22. $r = 4.76\%$  |
| 10. $x = \frac{-5 \pm \sqrt{109}}{6}$           | 23. \$2,380,000   |
| 11. 1/4   | 24. ${}_{20}C_5 = 15,504$ ; ${}_{20}P_3 = 6840$                 |
| 12. (-1,-4); (-3,0) & (1, 0); (0,-3); graph     | 25. 7 years ; 7.5 years ; 8.125 years ; 2.17 years              |
| 13. 3/5; 39/50; 3/5; 9/19; 3/25                 |   |