

Exam 1 - Spring 2005 - ANSWERS

1. TRUE
2. TRUE
3. TRUE
4. FALSE
5. FALSE
6. FALSE
7. FALSE
8. TRUE
9. FALSE
10. TRUE
11. C
12. B
13. D
14. C
15. A
16. C
17. A
18. B
19. A
20. D
21. B
22. B
23. A
24. C
25. B

26. B

27. A

28. A.) $z = (500 - 533)/110 = -0.30$ and $P(z > -0.30) = 0.6197$

B.) $x = 533 + 2.33(110) = 789.3$

29. A.) $\mu_{\text{new}} = 2.2(66) = 145.2$ lbs and $\sigma_{\text{new}} = 2.2(9) = 19.8$ lbs

B.) Greater than 9 Kg, because the 2 groups together are more spread out than they are individually.

30. A.) For 1 inch increase in height we expect (predict) a 6 pounds increase in average weight.

B.) $\hat{y} = -250 + 6(72) = 182$ lbs.

C.) $\text{residual} = 178 - 182 = -4$ lbs.

31. A.) WEAKER

B.) DECREASE