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| **1.** (TCO 9) What is the feasible range for r, the correlation coefficient? (Points: 6)       0 to 1        -0.5 to 0.5        -1 to 1        -1 to 0 **2.** (TCO 5) The Canadian Services office did a survey of 150 travelers in which they asked if the traveler's first language was French or English. Another question asked was whether the traveler was Canadian born. The results follow.If a traveler is selected at random (from this group of 150 travelers), find the probability thatP(The traveler is a Canadian.) (Points: 6)       7/15        8/15        13/30        4/17 **3.** (TCO 5) The Canadian Services office did a survey of 150 travelers in which they asked if the traveler's first language was French or English. Another question asked was whether the traveler was Canadian born. The results follow.If a traveler is selected at random (from this group of 150 travelers), find the probability thatP(The traveler is not Canadian and speaks French as the first language.) (Points: 6)       20/85        20/70        0.135        20/150 **4.** (TCO 5) The Canadian Services office did a survey of 150 travelers in which they asked if the traveler's first language was French or English. Another question asked was whether the traveler was Canadian born. The results follow.If a traveler is selected at random (from this group of 150 travelers), find the probability thatP (The traveler speaks French as a first language given he is a Canadian.) (Points: 6)       65/150        0.800        65/80        65/85 **5.** (TCO 2) In a study done by the National Health Foundation, it was determined that the mean number of headaches for women is 14 per year with a standard deviation of 2.5.How many standard deviations is 16.50 from the mean? (Points: 6)       1.25        1.00        0.75        0.50 **6.** (TCO 6) Find the following probability involving the Standard Normal Distribution. What is P(z < 0.25)? (Points: 6)       0.4013        0.9938        0.8944        0.5987 **7.** (TCO 8) Suppose you are performing a hypothesis test on a claim about a population proportion. Using an alpha = 0.01 and n = 100, what is the rejection region if the alternate hypothesis is Ha: p > 0.75? (Points: 6)       Reject Ho if z > 1.28        Reject Ho if z > 1.64        Reject Ho if z < -2.33        reject Ho if z > 2.33 **8.** (TCO 8) Suppose you are performing a hypothesis test on a claim about a population proportion. Using an alpha = 0.05 and n = 90, what two critical values determine the rejection region if the null hypothesis is: Ho: p = 0.35? (Points: 5)       1.28, -1.28        1.96, -1.96        2.33, -2.33        none of these **9.** (TCO 2) If the standard deviation of some data is 36, what is the variance? (Points: 5)       6        72        1296        720 **10.** (TCO 1) Determine the minimum required sample size if you want to be 95% confident that the sample mean is within 3 units of the population mean given sigma = 7.8. Assume the population is normally distributed. (Points: 5)       6        26        13        52 **11.** (TCO 3) The stem and leaf plot for the following data is displayed below: {70, 78, 76, 55, 43, 56, 32, 67, 68, 71, 75, 67, 60, 62, 58, 75, 21}Stem and Leaf Plot:2 | 13 | 24 | 35 | 5 6 86 | 0 2 7 7 87 | 0 1 5 5 6 8What is the shape of the data distribution? (Points: 5)       uniform        skewed left        skewed right        symmetric **12.** (TCO 4) The random variable X represents the annual salaries in dollars of a group of teachers. Find the expected value E(X).X = {$30,000, $40,000, $50,000}P(30,000) = 0.6; P(40,000) = 0.3; P(50,000) = 0.1 (Points: 5)       $18,000        $35,000        $30,000        $22,000 **13.** (TCO 6) Scores on an exam for entering a private school are normally distributed, with a mean of 72 and a standard deviation of 6. To be eligible to enter, a person must score in the top 5%. What is the lowest score you can earn and still be eligible to enter? (Points: 5)       82        72        80        78 **14.** (TCO 5) A shipment of 50 television sets contains 3 defective units. How many ways can a vending company buy three of these units and receive no defective units? (Points: 5)       50        10, 210        16,215        12, 324 **15.** (TCO 6) The time required to process a ton of sugar cane in a plant in Central America in a recent year was normally distributed with a mean 5 days and a standard deviation of 0.5 days (i.e., 12 hours). What is the probability that it will take more than 6 days to process a ton of sugar cane? (Points: 5)       0.9772        0.0228        0.8413        0.1587 **16.** (TCO 10) The earnings per share (in dollars) for McDonald's Corporation are given by the equation y-hat = 0.668 + 0.046a - 0.015b where 'a' represents total revenue (in billions of dollars) and 'b' represents total net worth (in billions of dollars). Predict the earnings per share when total revenue is $10 billion and net worth is $5 billion. (Points: 5)       1.053        0.778        0.061        0.984 **17.** (TCO 9) The estimated value for the correlation coefficient for this graph might be(Points: 3)       -0.50        0.50        1.00        -0.85  |

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