**Using the t-tables, software, or a calculator, estimate the critical value of t for the given confidence interval and degrees of freedom. 80% confidence interval with df = 11**

**A)1.356**
**B) 1.280**
**C) 2.718**
**D) 1.363**
**E) 1.372**

**Using the t-tables, software, or a calculator, estimate the critical value of t for the given confidence interval and degrees of freedom. 90% confidence interval with df = 4.**

**A)4.604**
**B) 1.645**
**C) 1.533**
**D) 2.353**
**E) 2.132**

**Using the t-tables, software, or a calculator, estimate the critical value of t for the given confidence interval and degrees of freedom. 95% confidence interval with df = 15**

**A)2.120**
**B) 1.960**
**C) 2.145**
**D) 2.131**
**E) 1.753**

D) 1.363

E) 2.132

D) 2.131

**Interpret the confidence interval. Analysis of a random sample of 250 Illinois nurses produced a 95% confidence interval for the mean annual salary of $42,803 < μ(Nurse Salary) < $49,692.**

**A)We are 95% confident that the average nurse salary in the U.S. is between $42,803 and $49,692.**
**B)About 95% of Illinois nurses earn between $42,803 and $49,692.**
**C)We are 95% confident that the interval from $42,803 to $49,692 contains the true mean salary of all Illinois nurses.**
**D)If we took many random samples of Illinois nurses, about 95% of them would produce this confidence interval.**
**E)About 95% of the nurses surveyed earn between $42,803 and $49,692.**

**Interpret the confidence interval. Data collected by child development scientists produced the following 90% confidence interval for the average age (in months) at which children say their first word: 10.1 < μ(age) < 13.7.**

**A)Based on this sample, we can say, with 90% confidence, that the mean age at which children say their first word is between 10.1 and 13.7 months.**
**B)We are 90% sure that the average age at which children in this sample said their first word was between 10.1 and 13.7 months.**
**C)If we took many random samples of children, about 90% of them would produce this confidence interval.**
**D)We are 90% sure that a child will say his first word when he is between 10.1 and 13.7 months old.**
**E)90% of the children in this sample said their first word when they were between 10.1 and 13.7 months old.**

**Interpret the confidence interval. A credit union took a random sample of 40 accounts and obtained the following 90% confidence interval for the mean checking account balance at the institution: $2199 < μ(balance) < $3820.**

**A)We are 90% confident that the mean checking account balance at this credit union is between $2199 and $3820, based on this sample.**
**B)If we took random samples of checking accounts at this credit union, about nine out of ten of them would produce this confidence interval.**
**C)About 9 out of 10 people have a checking account balance between $2199 and $3820.**
**D)We are 90% confident that the mean checking account balance in the U.S. is between $2199 and $3820.**
**E)We are 90% sure that the mean balance for checking accounts in the sample was between $2199 and $3820.**

**C) We are 95% confident that the interval from $42,803 to $49,692 contains the true mean salary of all Illinois nurses.**

**A)Based on this sample, we can say, with 90% confidence, that the mean age at which children say their first word is between 10.1 and 13.7 months.**

**A)We are 90% confident that the mean checking account balance at this credit union is between $2199 and $3820, based on this sample.**

**You want to determine if the average gas price in your city has exceeded $2.15 per gallon for regular gas. You take a random sample of prices from 8 gas stations , recording the following prices: $2.13, $2.10, $1.80, $2.09, $2.17, $2.12, $2.10, $2.11. Have the conditions and assumptions for inference been met?**

**A)Yes, all conditions and assumptions have been met.**
**B)No, the sample is not random.**
**C)No, the sample is not representative.**
**D)No, the nearly normal condition is not met.**
**E)No, the sample is more than 10% of the population.**

**How much fat do reduced fat cookies typically have? You take a random sample of 50 reduced-fat cookies and test them in a lab, finding a mean fat content of 3.2 grams and a standard deviation of 1.1 grams of fat. Have the conditions and assumptions for inference been met?**

**A)No, the sample is not likely to be representative.**
**B)Yes, all conditions and assumptions are reasonably assumed to be met.**
**C)No, we have sampled more than 10% of the population.**
**D)No, it is not a random sample.**
**E)No, the sample is not big enough to satisfy the nearly normal condition.**

**How tall is your average statistics classmate? To determine this, you measure the height of a random sample of 15 of your 100 fellow students, finding a mean height of 68 inches and a standard deviation of 2.3 inches. Have the conditions and assumptions for inference been met?**

**A)No, the population is not likely to be Normal.**
**B)No, the sample is more than 10% of the population.**
**C)No, the sample wasn't random.**
**D)Yes, all conditions and assumptions have been met.**
**E)No, the sample is not representative.**

**D)No, the nearly normal condition is not met.**

**B)Yes, all conditions and assumptions are reasonably assumed to be met.**

**B)No, the sample is more than 10% of the population.**