WHO are YOU



SHORT ANSWER/PROBLEM SOLVING. Be sure to explain reasoning where necessary

Sol	ve	the	prob	lem.
-0,		CALC	PAUL	TCTTT.

1) Find the critical value, t_c for c = 0.99 and n = 10.

2) Find the value of E, the margin of error, for c = 0.90, n = 10 and s = 3.7.

2.1

3) A random sample of 40 college students has a mean earnings of \$3120 with a standard deviation of \$677 over the summer months. Determine whether a normal distribution or a t-distribution should be used or whether neither of these can be used to construct a confidence interval.

4) Construct a 95% confidence interval for the population mean, μ. Assume the population has a normal distribution. A sample of 25 randomly selected students has a mean test score of 81.5 with a standard deviation of 10.2.

5) Construct a 98% confidence interval for the population mean, μ. Assume the population has a normal distribution. A study of 14 bowlers showed that their average score was 192 with a standard deviation of 8.

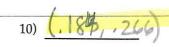
6) A random sample of 10 parking meters in a beach community showed the following incomes for a day. Assume the incomes are normally distributed.

\$3.60 \$4.50 \$2.80 \$6.30 \$2.60 \$5.20 \$6.75 \$4.25 \$8.00 \$3.00

Find the 95% confidence interval for the true mean.

7) A coffee machine is supposed to dispense 12 ounces of coffee in each cup. An inspector selects a random sample of 40 cups of coffee and finds they have an average amount of 12.2 ounces with a standard deviation of 0.3 ounce. Use a 95% confidence interval to test whether the machine is dispensing acceptable amounts of coffee.

- 8) When 325 college students were surveyed,115 said they own their car. Find a point estimate for p, the population proportion of students who own their cars.
- 9) A survey of 2210 golfers showed that 399 of them are left-handed. Find a point estimate for p, the population proportion of golfers that are left-handed.
- 10) A survey of 280 homeless persons showed that 63 were veterans. Construct a 90% confidence interval for the proportion of homeless persons who are veterans.



11) A private opinion poll is conducted for a politician to determine what proportion of the population favors decriminalizing marijuana possession. How large a sample is needed in order to be 98% confident that the sample proportion will not differ from the true proportion by more than 5%?

63 = P = .225 & -.775 E= ,041

- 12) In a survey of 2480 golfers, 15% said they were left-handed. The survey's margin of error was 3%. Find the confidence interval for p.

 $1.785\sqrt{\frac{(.15)(.85)}{2480}} = .013$

Name		
TIGHTEC		

1) Find the critical value	t_c , t_c for $c = 0.99$ and $n = 10$.			1)
A) 3.250	B) 2.262	C) 1.833	D) 2.2821	1)
,	-, -,	C/ 1.000	D) 2.2021	
2) Find the critical value	e, $t_{\rm C}$, for $c = 0.90$ and $n = 15$.	PON SALVANIA ANTONOMO VARIANTA	▼ Is Naville FT AND	2)
A) 2.145	B) 1.761	C) 2.624	D) 1.345	, H
3) Find the value of E, th	ne margin of error, for $c = 0$	0.90, $n = 10$ and $s = 3.7$.		3)
A) 1.62	B) 2.12	C) 0.68	D) 2.14	-
deviation of \$22.50. D		al distribution or a t-distri	bution should be used or	4) _
B) Use a normal dis				
	l distribution nor a t-distril	hution can be used		
5) A random sample of	40 college students has a m	ean earnings of \$3120 wit	h a standard deviation of	5)
\$677 over the summed be used or whether no A) Use a normal dis B) Use a t-distributi	r months. Determine whetleither of these can be used tribution. ion.	her a normal distribution o to construct a confidence i	or a t-distribution should	5) _
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ç) Construct a 98% confidence interval for the population mean, μ. Assume the population has a normal distribution. A study of 14 bowlers showed that their average score was 192 with a standard deviation of 8.				
	A) (186.3, 197.7)	B) (115.4, 158.8)	C) (328.3, 386.9)	D) (222.3, 256.1)	
10	normal distribution. Ir	dence interval for the popu a recent study of 22 eight vision was 19.6 with a star	h graders, the mean numb	er of hours per week	10) 📗
	A) (5.87, 7.98)	B) (17.47, 21.73)	C) (18.63, 20.89)	D) (19.62, 23.12)	
11	_	0 parking meters in a beac nes are normally distribut	•	following incomes for a	11)
	\$3.60 \$4.50 \$2.80 \$6.3	30 \$2.60 \$5.20 \$6.75 \$4.25	5 \$8.00 \$3.00		
	Find the 95% confiden	ce interval for the true me	an.		
	A) (\$2.11, \$5.34)	B) (\$3.39, \$6.01)	C) (\$4.81, \$6.31)	D) (\$1.35, \$2.85)	
12	12) A local bank needs information concerning the checking account balances of its customers. A random sample of 15 accounts was checked. The mean balance was \$686.75 with a standard deviation of \$256.20. Find a 98% confidence interval for the true mean. Assume that the account balances are normally distributed.				12)
	A) (\$326.21, \$437.90)		B) (\$238.23, \$326.41)		
	C) (\$487.31, \$563.80)		D) (\$513.17, \$860.33)		