

Name: Caleb McWhorter — Solutions
MAT 222
Spring 2019
Quiz 2

“Here’s a bunch of numbers. They may look random but they’re my phone number.”

– Tina Belcher, *Bob’s Burgers*

Mark the following statements True or False.

Problem 1: A t -procedure can be used for a *skewed* distribution if $n \geq 40$.

- (a) True
(b) False

Problem 2: A t -procedure is sensitive to the data not being normally distributed.

- (a) True
(b) False

Problem 3: An internet marketing company is trying to determine the average time Americans spend on the internet each week. They track the internet usage of 26 volunteers. They found an average time of 26.3 hours spent on the internet with a standard deviation of 2.7 hours. To construct a 95% confidence interval for the average time an American spends on the internet, fill out the entries below.

Sample Average:	<u>26.3</u>	t^* :	<u>2.060</u>
Sample StDev:	<u>2.7</u>	Lower Confidence Value:	<u>25.21</u>
n :	<u>26</u>	Upper Confidence Value:	<u>27.39</u>
d.o.f.:	<u>25</u>		

Problem 4: The marketing company then performs the hypothesis test given below.

$$\begin{cases} H_0 : \mu = 25 \\ H_a : \mu \neq 25 \end{cases}$$

Fill in the following:

t -statistic: 2.455 p -value: 0.04