| Online Homework Package Created by : Elsit and Satya Mandal |  |  |
| :---: | :---: | :---: |
| Course Id :Math 105 | Topics in Mathematics | Semester : Summer2017 |
| Instructor :Satya Mandal Line No : 84895 |  |  |
| Homework No: 29 | Total Points :50 | $\begin{gathered} \text { Due Date:(YYYY-MM-DD) } \\ 2017-07-27 \end{gathered}$ |

Question- It is claimed that, in a border town, the immigrant population rose above 50 percent. In a sample of
211 individuals, 119 were immigrant. Perform a significant test. Here we test 1211 individuals, 119 were immigrant. Perform a significant test. Here we test

$$
\begin{aligned}
& \mathrm{H}_{0}: \mathrm{p}=.5 \\
& \mathrm{H}_{\mathrm{A}}: \mathrm{p}>.5
\end{aligned}
$$

What is the value of the test statistics?

| Answer <br> Question-1 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| Statistic Value $=$ |  |
| Points | 5.00 |

Question- Decide if it is a Two Tail, Left Tail or Right Tail Test and compute the p-value of the collected data 2 in Question 1.

| Answer <br> Question-2 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| p-Value $=$ |  |
| Points | 5.00 |

Question3

Refer to Question 1. What would be the lowest level of significance, percent among .1, .5, 1, 2, 3, $4,5,6,7,8,9,10$ percent, at which you would accept that the immigrant population rose above 50 percent?

| Answer <br> Question-3 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| Lowest percent $=$ |  |
| Points | 5.00 |

Question-
4 exceeded 20 percent. A sample of 276 people from were examined for AIDS-HIV and 64 were
https://www.math.ku.edu/~mandal/cgi-bin/teacher365edit.cgi?semester=Summer2017\&hwNumber=29\&teacherId=satya\&studentId=guest\&dueDate=2017-07-27\&reqType=11\&lineI
found to be infected by AIDS-HIV. Perform a significant test. Here we test

$$
\begin{aligned}
& \mathrm{H}_{0}: \mathrm{p}=.2 \\
& \mathrm{H}_{\mathrm{A}}: \mathrm{p}>.2
\end{aligned}
$$

What is the value of the test statistics?

| Answer <br> Question-4 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| Statistics Value $=$ |  |
| Points | 5.00 |

Question- Refer to Question 4. Decide if it is a Two Tail, Left Tail or Right Tail Test and compute the p-value 5 of the collected data.

| Answer <br> Question-5 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| p-Value $=$ |  |
| Points | 5.00 |

Question- Refer to Question 4. What would be the lowest level of significance, percent among .1, .5, 1, 2, 3, $644,5,7,8,9,10$ percent, at which you would accept that the proportion of the population infected with AIDS-HIV has exceeded 20 percent?

| Answer <br> Question-6 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| Lowest percent $=$ |  |
| Points | 5.00 |

Question- About 13 percent of items produced by an old machine are defective. You took a sample of 721 7 items produced by a new machine, and 76 were defective. Perform a significant test that the new machine is better. Here we test

$$
\begin{aligned}
& \mathrm{H}_{0}: \mathrm{p}=.13 \\
& \mathrm{H}_{\mathrm{A}}: \mathrm{p}<.13
\end{aligned}
$$

Compute the p -value of the collected data.

| Question- | Refer to Question 7. What would be the lowest level of significance, percent among $.1, .5,1,2,3$, <br> $\mathbf{8}$ |
| :--- | :--- |
| $4,5,6,7,8,9,10$ percent, at which you would accept that the proportion of the population infected <br> with AIDS-HIV has exceeded 20 percent? |  |


| Answer <br> Question-8 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| Lowest percent $=$ |  |
| Points | 5.00 |

 $\$ 70 \mathrm{~K}$ or more annually. Perform a significant test. Here we test

$$
\begin{aligned}
& \mathrm{H}_{0}: \mathrm{p}=.6 \\
& \mathrm{H}_{\mathrm{A}}: \mathrm{p}>.6
\end{aligned}
$$

Compute the p -value of the collected data.

| Answer <br> Question-9 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| p-value $=$ |  |
| Points | 5.00 |

Question- Refer to Question 9. What would be the lowest level of significance, percent among .1, .5, 1, 2, 3, $4,5,6,7,8,9,10$ percent, at which you would accept that the proportion of the population infected with AIDS-HIV has exceeded 20 percent?

| Answer <br> Question-10 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| Lowest Percent $=$ |  |
| Points | 5.00 |

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