| Online Homework Package <br> Created by : Ilsit and antya Mandal |  |  |  |
| :---: | :---: | :---: | :---: |
| Course Id :Math 105 | Topics in Math | Semester : Summer2017 |  |
| Instructor :Satya Mandal <br> Line No : 84895 |  |  |  |
| Homework No: 19 | Total Points :50 | Due Date:(YYYY-MM-DD) <br> 2017-07-27 |  |


| Question- |
| :--- | :--- |
| $\mathbf{1}$ | | The probability that a family (in a county) invests in the stock market is $\mathrm{p}=0.8$. A statistician |
| :--- |
| interviewed 800 families. What is the probability that at most 650 would have invested in the stock |
| market (Use TI)? |


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

Question- Refer to Question 1. Use normal approximation to binomial to find an approximate probability that 2 at most 650 would have invested in the stock market.

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

Question- The probability that a person (in a county) favors medical use of marijuana is $\mathrm{p}=0.6$. A statistician 3 interviewed 700 individuals. What is the probability that at least 413 will be in favor (Use TI)?

| Answer <br> Question-3 | This is a Numerical-Answer Type Question |
| :--- | :--- | :--- |
| $\mathrm{P}(413 \leq \mathrm{X})=$ |  |
| Points | 5.00 |

Question- Refer to Question 3. Use normal approximation to binomial to find an approximate probability that 4 at least 413 will be in favor.

Answer Question-4 $\square$
This is a Numerical-Answer Type Question
Approximate $\mathrm{P}(412.5<\mathrm{X})=$

Question- It is claimed that 55 percent of the population supports government action on poverty. A sample of 5 780 are interviewed. What is the probability that at most 450 would support the same (Use TI)?

| Answer <br> Question-5 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| P(X $\leq 450)=$ |  |
| Points | 5.00 |

Question- Refer to Question 5. Use normal approximation to binomial to find an approximate probability that 6 at most 450 would support government action on poverty.

| Answer <br> Question-6 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| Approximate $\mathrm{P}(\mathrm{X}<450.5)=$ |  |
| Points | 5.00 |

Question- A producer of a drug claims that only 22 percent of the patients may suffer some side effects. The 7 drug was sprecribed to 600 patients. What is the probability that more than 130 would suffer from some side effect (Use TI)?

| Answer <br> Question-7 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| $\mathrm{P}(130<\mathrm{X})=\mathrm{P}(131 \leq \mathrm{X})=$ |  |
| Points | 5.00 |

Question- Refer to Question 7. Use normal approximation to binomial to find an approximate probability that 8 more than 130 would suffer from some side effect.

| Answer <br> Question-8 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| Approximate $\mathrm{P}(130.5<\mathrm{X})=$ |  |
| Points | 5.00 |

Question- It is speculated that the proportion p of students who paid more than $\$ 5000$ tuition this year is $\mathrm{p}=$ 9 .58. A sample of 680 students was collected. Assuming that this speculation is correct, what is the probability that more than 400 would have paid more than $\$ 5000$ in tuition (Use TI).

| Answer <br> Question-9 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| $\mathrm{P}(400<\mathrm{X})=\mathrm{P}(401 \leq \mathrm{X})=$ |  |
| Points | 5.00 |

## Question- Refer to Question 9. Use normal approximation to binomial to find an approximate probability that 10 more than 400 would have paid more than $\$ 5000$ in tuition

| Answer <br> Question-10 | This is a Numerical-Answer Type Question |
| :--- | :--- |
| Approximate $\mathrm{P}(400.5<\mathrm{X})=$ |  |
| Points | 5.00 |

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