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| **#1 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the arithmetic mean of  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#1 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the arithmetic mean of  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#1 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the arithmetic mean of  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#1 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the arithmetic mean of    **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#2 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the population variance of the set {1,2,4,8,10}?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#2 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the population variance of the set {1,2,4,8,10}?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#2 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the population variance of the set {1,2,4,8,10}?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#2 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the population variance of the set {1,2,4,8,10}?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#3 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Based on the empirical rule, what z-score corresponds to the 84th percentile?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#3 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Based on the empirical rule, what z-score corresponds to the 84th percentile?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#3 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Based on the empirical rule, what z-score corresponds to the 84th percentile?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#3 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Based on the empirical rule, what z-score corresponds to the 84th percentile?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#4 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For normal distributions X and Y, and . For both distributions, the data point x=y=9 has the same z-score. What is the ratio of the standard deviations ?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#4 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For normal distributions X and Y, and . For both distributions, the data point x=y=9 has the same z-score. What is the ratio of the standard deviations ?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#4 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For normal distributions X and Y, and . For both distributions, the data point x=y=9 has the same z-score. What is the ratio of the standard deviations ?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#4 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For normal distributions X and Y, and . For both distributions, the data point x=y=9 has the same z-score. What is the ratio of the standard deviations ?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#5 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  One general, two captains, two majors, and three sergeants are seated at a fixed round table for a meeting. How many distinct arrangements **based on rank** can they be seated around the table?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#5 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  One general, two captains, two majors, and three sergeants are seated at a fixed round table for a meeting. How many distinct arrangements **based on rank** can they be seated around the table?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#5 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  One general, two captains, two majors, and three sergeants are seated at a fixed round table for a meeting. How many distinct arrangements **based on rank** can they be seated around the table?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#5 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  One general, two captains, two majors, and three sergeants are seated at a fixed round table for a meeting. How many distinct arrangements **based on rank** can they be seated around the table?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#6 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the mean of the following discrete probability distribution?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | X | 2 | 3 | 5 | 7 | 8 | | P(X) | .13 | .2 | .22 | .31 | .14 |   **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#6 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the mean of the following discrete probability distribution?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | X | 2 | 3 | 5 | 7 | 8 | | P(X) | .13 | .2 | .22 | .31 | .14 |   **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#6 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the mean of the following discrete probability distribution?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | X | 2 | 3 | 5 | 7 | 8 | | P(X) | .13 | .2 | .22 | .31 | .14 |   **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#6 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  What is the mean of the following discrete probability distribution?   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | X | 2 | 3 | 5 | 7 | 8 | | P(X) | .13 | .2 | .22 | .31 | .14 |   **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#7 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Subjects are numbered from 01-50 in a clinical trial and the first five subjects will receive treatment A. From the start of the random number line below, who is the 5th subject selected?  10920 99980 79686 40569 57918 58986 55782 65395 36556 23074 36960 95303 20275  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#7 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Subjects are numbered from 01-50 in a clinical trial and the first five subjects will receive treatment A. From the start of the random number line below, who is the 5th subject selected?  10920 99980 79686 40569 57918 58986 55782 65395 36556 23074 36960 95303 20275  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#7 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Subjects are numbered from 01-50 in a clinical trial and the first five subjects will receive treatment A. From the start of the random number line below, who is the 5th subject selected?  10920 99980 79686 40569 57918 58986 55782 65395 36556 23074 36960 95303 20275  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#7 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Subjects are numbered from 01-50 in a clinical trial and the first five subjects will receive treatment A. From the start of the random number line below, who is the 5th subject selected?  10920 99980 79686 40569 57918 58986 55782 65395 36556 23074 36960 95303 20275  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#8 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#8 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#8 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#8 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#9 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#9 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#9 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#9 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If A and B are independent events, and P(A)=0.7 and P(B)=0.6, evaluate  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#10 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  An urn has 4 green marbles, 3 blue marbles, 5 red marbles, and 6 yellow marbles in it. Two marbles are drawn from the urn one at a time without replacement. What is the probability that both marbles drawn are the same color?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#10 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  An urn has 4 green marbles, 3 blue marbles, 5 red marbles, and 6 yellow marbles in it. Two marbles are drawn from the urn one at a time without replacement. What is the probability that both marbles drawn are the same color?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#10 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  An urn has 4 green marbles, 3 blue marbles, 5 red marbles, and 6 yellow marbles in it. Two marbles are drawn from the urn one at a time without replacement. What is the probability that both marbles drawn are the same color?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#10 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  An urn has 4 green marbles, 3 blue marbles, 5 red marbles, and 6 yellow marbles in it. Two marbles are drawn from the urn one at a time without replacement. What is the probability that both marbles drawn are the same color?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#11 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For a set of bivariate data, , , and with correlation coefficient . What is the x-intercept of the least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#11 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For a set of bivariate data, , , and with correlation coefficient . What is the x-intercept of the least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#11 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For a set of bivariate data, , , and with correlation coefficient . What is the x-intercept of the least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#11 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  For a set of bivariate data, , , and with correlation coefficient . What is the x-intercept of the least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#12 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . From the data, when , . What is the value of its residual?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#12 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . From the data, when , . What is the value of its residual?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#12 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . From the data, when , . What is the value of its residual?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#12 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . From the data, when , . What is the value of its residual?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#13 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . For this data, , , , and . What is the coefficient of determination for this least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#13 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . For this data, , , , and . What is the coefficient of determination for this least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#13 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . For this data, , , , and . What is the coefficient of determination for this least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#13 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A set of bivariate data of Y on X has a least squares regression line of the form . For this data, , , , and . What is the coefficient of determination for this least squares regression line?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#14 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the probability that Cameron rolls exactly two 4s?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#14 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the probability that Cameron rolls exactly two 4s?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#14 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the probability that Cameron rolls exactly two 4s?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#14 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the probability that Cameron rolls exactly two 4s?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#15 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the expected number of rolls it would take before you first roll five of the same number?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#15 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the expected number of rolls it would take before you first roll five of the same number?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#15 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the expected number of rolls it would take before you first roll five of the same number?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#15 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  A dice game has 5 four-sided dice with equal probability of rolling a 1, 2, 3, and 4. What is the expected number of rolls it would take before you first roll five of the same number?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#16 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a recent poll of 200 citizens, 62% of voters favor the incumbent over 38% who favor the challenger, with a margin of error of 9%. An additional 1600 citizens are interviewed, and of the total sample, still 62% of voters favor the incumbent. What is the new margin of error?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#16 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a recent poll of 200 citizens, 62% of voters favor the incumbent over 38% who favor the challenger, with a margin of error of 9%. An additional 1600 citizens are interviewed, and of the total sample, still 62% of voters favor the incumbent. What is the new margin of error?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#16 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a recent poll of 200 citizens, 62% of voters favor the incumbent over 38% who favor the challenger, with a margin of error of 9%. An additional 1600 citizens are interviewed, and of the total sample, still 62% of voters favor the incumbent. What is the new margin of error?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#16 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a recent poll of 200 citizens, 62% of voters favor the incumbent over 38% who favor the challenger, with a margin of error of 9%. An additional 1600 citizens are interviewed, and of the total sample, still 62% of voters favor the incumbent. What is the new margin of error?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#17 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Given , , and , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#17 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Given , , and , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#17 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Given , , and , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#17 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Given , , and , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#18 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Let F­7 be the set of the first seven Fibonacci numbers, starting at 1. Evaluate the sum of the median of F7 and the IQR of F7.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#18 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Let F­7 be the set of the first seven Fibonacci numbers, starting at 1. Evaluate the sum of the median of F7 and the IQR of F7.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#18 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Let F­7 be the set of the first seven Fibonacci numbers, starting at 1. Evaluate the sum of the median of F7 and the IQR of F7.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#18 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Let F­7 be the set of the first seven Fibonacci numbers, starting at 1. Evaluate the sum of the median of F7 and the IQR of F7.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#19 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  16 people were interviewed from two independent counties on their support for the running senator. In County 1, 7 of 16 approved of the senator, but in County 2, 9 of 16 approved. You run a statistical test to see if the approval rate is different between the counties. What is the standard deviation of the sampling distribution?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#19 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  16 people were interviewed from two independent counties on their support for the running senator. In County 1, 7 of 16 approved of the senator, but in County 2, 9 of 16 approved. You run a statistical test to see if the approval rate is different between the counties. What is the standard deviation of the sampling distribution?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#19 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  16 people were interviewed in two independent counties on their support for the running senator. In County 1, 7 of 16 approved of the senator, but in County 2, 9 of 16 approved. You run a statistical test to see if the approval rate is different between the counties. What is the standard deviation of the sampling distribution?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#19 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  16 people were interviewed from two independent counties on their support for the running senator. In County 1, 7 of 16 approved of the senator, but in County 2, 9 of 16 approved. You run a statistical test to see if the approval rate is different between the counties. What is the standard deviation of the sampling distribution?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#20 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Consider sample data with  with a sample size of . Construct the 95% confidence interval about . Assume that the population variance is 4.5, and round your critical test statistic to two decimal places.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#20 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Consider sample data with  with a sample size of . Construct the 95% confidence interval about . Assume that the population variance is 4.5, and round your critical test statistic to two decimal places.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#20 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Consider sample data with  with a sample size of . Construct the 95% confidence interval about . Assume that the population variance is 4.5, and round your critical test statistic to two decimal places.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#20 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Consider sample data with  with a sample size of . Construct the 95% confidence interval about . Assume that the population variance is 4.5, and round your critical test statistic to two decimal places.  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#21 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a test of independence between political belief (republican, democrat, or independent) and favorite color out of seven choices, how many degrees of freedom will the test have?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#21 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a test of independence between political belief (republican, democrat, or independent) and favorite color out of seven choices, how many degrees of freedom will the test have?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#21 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a test of independence between political belief (republican, democrat, or independent) and favorite color out of seven choices, how many degrees of freedom will the test have?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#21 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  In a test of independence between political belief (republican, democrat, or independent) and favorite color out of seven choices, how many degrees of freedom will the test have?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |

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| **#22 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  The following table shows the grades of student’s in Mr. Kim’s statistics class:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Grade | A | B | C | D | F | | Freq. | 6 | 7 | 4 | 3 | 0 |   If all grades are expected to occur with equal frequency, then what is the value of the  test statistic of the appropriate goodness of fit test?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#22 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  The following table shows the grades of student’s in Mr. Kim’s statistics class:   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | Grade | A | B | C | D | F | | Freq. | 6 | 7 | 4 | 3 | 0 |   If all grades are expected to occur with equal frequency, then what is the value of the  test statistic of the appropriate goodness of fit test?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
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| **#23 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  How many of the following statistics are measures of central tendency?  Mean Median  Range IQR  Correlation Standard deviation  z-score Variance  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#23 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  How many of the following statistics are measures of central tendency?  Mean Median  Range IQR  Correlation Standard deviation  z-score Variance  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
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| **#24 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Out of 20 people, how many groups of 3 people can be chosen?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#24 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  Out of 20 people, how many groups of 3 people can be chosen?  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
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| **#25 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If the expected value of a random variable X is  with standard deviation , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#25 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If the expected value of a random variable X is  with standard deviation , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |
| **#25 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If the expected value of a random variable X is  with standard deviation , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** | **#25 Probability & Statistics – Hustle**  **National MAΘ Convention 2014**  If the expected value of a random variable X is  with standard deviation , evaluate .  **Answer : \_\_\_\_\_\_\_\_\_\_\_\_\_**  **Round 1 2 3 4 5** |