Find the mean of the following set of data:

72, 92, 61, 17, 99, 56, 65, 77, 74, 97

Answer: ________________________

Round 1  2  3  4  5

Find the mean of the following set of data:

72, 92, 61, 17, 99, 56, 65, 77, 74, 97

Answer: ________________________

Round 1  2  3  4  5
Given \( P(A) = .7, \ P(B) = .8, \) and events A and B are independent, find the value of the following:
\[ P(A \cup B) - P(A' \cap B') \]
Given the following statistics:
\[ \bar{x} = 50, \ s_x = 14, \ \bar{y} = 80, \ s_y = 7, \ r = .75 \]
find the equation of the line of best fit in slope intercept form.

Answer : ________________________

Round 1 2 3 4 5

Answer : ________________________

Round 1 2 3 4 5
Find the mean of the following discrete distribution.

<table>
<thead>
<tr>
<th>X</th>
<th>13</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>P(X)</td>
<td>.1</td>
<td>.2</td>
<td>.15</td>
<td>.2</td>
<td>.1</td>
<td>.25</td>
</tr>
</tbody>
</table>

Answer: ________________________

Round 1 2 3 4 5

Find the mean of the following discrete distribution.

<table>
<thead>
<tr>
<th>X</th>
<th>13</th>
<th>14</th>
<th>16</th>
<th>18</th>
<th>20</th>
<th>25</th>
</tr>
</thead>
<tbody>
<tr>
<td>P(X)</td>
<td>.1</td>
<td>.2</td>
<td>.15</td>
<td>.2</td>
<td>.1</td>
<td>.25</td>
</tr>
</tbody>
</table>

Answer: ________________________

Round 1 2 3 4 5
A grocery store is trying to determine if there is a difference between the amounts of money spent by morning shoppers and evening shoppers. 144 morning shoppers and 144 evening shoppers are randomly selected. The morning shoppers spend an average of $48 with a standard deviation of $8. The evening shoppers spend an average of $58 with a standard deviation of $6. Assume that all conditions for inference have been met. Find the value of the test statistic that will be used to determine if there is a difference between the shoppers. Assume that the test statistic is positive.

Answer: ________________

Round  1  2  3  4  5

A grocery store is trying to determine if there is a difference between the amounts of money spent by morning shoppers and evening shoppers. 144 morning shoppers and 144 evening shoppers are randomly selected. The morning shoppers spend an average of $48 with a standard deviation of $8. The evening shoppers spend an average of $58 with a standard deviation of $6. Assume that all conditions for inference have been met. Find the value of the test statistic that will be used to determine if there is a difference between the shoppers. Assume that the test statistic is positive.

Answer: ________________

Round  1  2  3  4  5
Mrs. Lynch gives an Algebra test. The results of her test form a normal distribution with mean 76 and standard deviation 5. Brian scored a 63 on the test and Julie scored a 90. Find the difference between Julie’s and Brian’s z scores. Assume that the difference is positive.

Answer: ____________________
Round 1 2 3 4 5
60% of the students at Seminole High are female. 30% of the male students and 40% of the female students participate in extracurricular activities. A student is randomly selected from Seminole High. Find the probability that the student is male, given that they do not participate in extracurricular activities.

Answer: ______________

Round 1 2 3 4 5

60% of the students at Seminole High are female. 30% of the male students and 40% of the female students participate in extracurricular activities. A student is randomly selected from Seminole High. Find the probability that the student is male, given that they do not participate in extracurricular activities.

Answer: ______________

Round 1 2 3 4 5
Terry is trying to get her dog Sam to fetch a ball and bring it back to her. Sam fetches the ball and brings it back 20% of the time. Terry takes Sam to the park, and will not leave until Sam fetches the ball and brings it back to her. Find the probability that Sam fetches the ball and brings it back by the third attempt.

Answer: ________________

Round 1 2 3 4 5

Terry is trying to get her dog Sam to fetch a ball and bring it back to her. Sam fetches the ball and brings it back 20% of the time. Terry takes Sam to the park, and will not leave until Sam fetches the ball and brings it back to her. Find the probability that Sam fetches the ball and brings it back by the third attempt.

Answer: ________________

Round 1 2 3 4 5
Every senior at Smith High takes a science class and a foreign language class. The results are below:

<table>
<thead>
<tr>
<th></th>
<th>Biology</th>
<th>Chemistry</th>
<th>Physics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish</td>
<td>20</td>
<td>35</td>
<td>25</td>
</tr>
<tr>
<td>French</td>
<td>10</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>Japanese</td>
<td>6</td>
<td>3</td>
<td>1</td>
</tr>
</tbody>
</table>

A $\chi^2$ test is done to determine if choices of science class and foreign language class are independent for the seniors. Find the expected number of seniors who take French and Chemistry.

Answer: ______________________

Round  1  2  3  4  5

A $\chi^2$ test is done to determine if choices of science class and foreign language class are independent for the seniors. Find the expected number of seniors who take French and Chemistry.

Answer: ______________________

Round  1  2  3  4  5
Given that variables $A$ and $B$ are independent, and their statistics are:

$\bar{A} = 65, s_A = 8, \bar{B} = 87, s_B = 12, r = .72$,

find the standard deviation of the variable $(3A - 2B)$.

Answer: ________________

Round 1 2 3 4 5
Shriya rolls a fair die six times. Find the probability that she rolls a prime number exactly four times.

Answer: ________________

Round 1 2 3 4 5

Shriya rolls a fair die six times. Find the probability that she rolls a prime number exactly four times.

Answer: ________________

Round 1 2 3 4 5
Given Mr. Green’s AP Statistics results:

<table>
<thead>
<tr>
<th>Score</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Probability</td>
<td>.2</td>
<td>.1</td>
<td>.3</td>
<td>.3</td>
<td>.1</td>
</tr>
</tbody>
</table>

Find the standard deviation of the results.

Answer: ________________________

Round 1 2 3 4 5

Answer: ________________________

Round 1 2 3 4 5
Find the median of the following set of data:

82, 98, 9, 41, 89, 51, 35, 29, 92, 53

Answer: ________________

Round 1 2 3 4 5
Find the standard deviation of the following set of randomly selected data:

1, 2, 3, 6, 7, 11

Answer: ________________________

Round    1    2    3    4    5

Find the standard deviation of the following set of randomly selected data:

1, 2, 3, 6, 7, 11

Answer: ________________________

Round    1    2    3    4    5
There is a linear relationship between Mr. Scales’ midterm exam scores and final exam scores. The equation is \( F = 3M - 25 \), where \( M \) is the midterm exam score and \( F \) is the final exam score. Ben scores a 56 on the midterm exam and an 88 on the final exam. Find the value of Ben’s residual.

Answer : _______________

Round 1 2 3 4 5
Phone company A is trying to determine if customer satisfaction differs when customers transfer their service from their former company to company A. Company A randomly selects 100 customers who went from company B to company A, and randomly selects 100 customers who went from company C to company A. 65 customers from company B and 55 customers from company C were satisfied with the transfer to company A. Find the standard deviation of the significance test used to determine if there is a difference in customer satisfaction between the two former companies.

Answer: ________________

Round 1 2 3 4 5

Phone company A is trying to determine if customer satisfaction differs when customers transfer their service from their former company to company A. Company A randomly selects 100 customers who went from company B to company A, and randomly selects 100 customers who went from company C to company A. 65 customers from company B and 55 customers from company C were satisfied with the transfer to company A. Find the standard deviation of the significance test used to determine if there is a difference in customer satisfaction between the two former companies.

Answer: ________________

Round 1 2 3 4 5
Lebron works on his free throw shooting every day. His free throw percentage is 65%. Each day after practice, Lebron shoots 81 free throws. Find the standard deviation of the number of free throws Lebron makes after each practice. Assume that each free throw is independent.

Answer: ________________

Round 1 2 3 4 5

Lebron works on his free throw shooting every day. His free throw percentage is 65%. Each day after practice, Lebron shoots 81 free throws. Find the standard deviation of the number of free throws Lebron makes after each practice. Assume that each free throw is independent.

Answer: ________________

Round 1 2 3 4 5
The results of Ms. Corbin's History test are a mean of 62 and a standard deviation of 12. Using a linear transformation, Ms. Corbin curves the test to produce a new mean of 75 and a new standard deviation of 8. Matt scored a 70 on the test. Find Matt's score after the curve is applied.

Answer: ________________
Round 1 2 3 4 5

The results of Ms. Corbin's History test are a mean of 62 and a standard deviation of 12. Using a linear transformation, Ms. Corbin curves the test to produce a new mean of 75 and a new standard deviation of 8. Matt scored a 70 on the test. Find Matt's score after the curve is applied.

Answer: ________________
Round 1 2 3 4 5
Given:

\[ P(A) = 0.38, \ P(B) = 0.5, \ P(A \mid B') = 0.42, \ find \ P(A' \cap B') \]

### Answer:

Round 1 2 3 4 5

Answer: ____________________  

Round 1 2 3 4 5
In the senior class at Jones High, 52 students take English, 55 take Math, and 55 take Science. 28 seniors take English and Science, 24 take Math and Science, and 30 take English and Math. 17 seniors take all three classes, and every senior takes at least one of the classes. Find the total number of seniors at Jones High.

Answer: ____________________

Round 1 2 3 4 5

Answer: ____________________

Round 1 2 3 4 5
The results of Mr. Ferguson’s test form a normal distribution with a mean of 71 and a standard deviation of 8. Using the empirical percentages, find the probability that a student scored between 63 and 87 on Mr. Ferguson’s test.

Answer: ________________

Round  1  2  3  4  5
Given the following statistics:

\[ \bar{x} = 75, s_x = 6, \bar{y} = 60, s_y = 10, y = \frac{20}{21} x - \frac{80}{7}, \]

find the coefficient of determination.

Answer: ________________________

Round 1 2 3 4 5

Answer: ________________________

Round 1 2 3 4 5
Amy is trying to determine if a standard die is fair. She rolls the die 60 times. Here are the results of the rolls:

<table>
<thead>
<tr>
<th>Value</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>6</td>
<td>11</td>
<td>8</td>
<td>10</td>
<td>14</td>
<td>11</td>
</tr>
</tbody>
</table>

Amy runs a $\chi^2$ goodness of fit test to determine if the die is fair. Find the exact value of the $\chi^2$ statistic.

Answer: ________________

Round 1 2 3 4 5
Bill and Ted play a simple game with a standard deck of cards (no jokers). Bill takes a card randomly from the deck. If Bill chooses a face card or a card with a prime number on it, he wins $12$ dollars. If Bill does not win the game, then Ted wins $X$ dollars. Find the value of $X$ for which the game is fair.

Answer: ________________

Round 1 2 3 4 5

Bill and Ted play a simple game with a standard deck of cards (no jokers). Bill takes a card randomly from the deck. If Bill chooses a face card or a card with a prime number on it, he wins $12$ dollars. If Bill does not win the game, then Ted wins $X$ dollars. Find the value of $X$ for which the game is fair.

Answer: ________________

Round 1 2 3 4 5
Find the interquartile range of the following set of data:
81, 10, 89, 2, 89, 96, 17, 4, 63, 43

Answer: ____________________

Round 1 2 3 4 5

Find the interquartile range of the following set of data:
81, 10, 89, 2, 89, 96, 17, 4, 63, 43

Answer: ____________________

Round 1 2 3 4 5