Find the sample standard deviation of the following: 5, 4, 4, 6, 6

Answer: ________________________

Round 1 2 3 4 5

Answer: ________________________

Round 1 2 3 4 5
The Dallas Cowboys are planning on rewarding their fans by randomly distributing a Dak Prescott bobblehead for every 500th person who enters AT&T Stadium for their Thanksgiving Day game. What type of random sampling design is being used?

Answer: ________________

Round 1 2 3 4 5

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Round 1 2 3 4 5
What are the number of distinct permutations of the letters of the word COLORADO?

<table>
<thead>
<tr>
<th>Round</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
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Answer: ____________________  
Answer: ____________________

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Answer: ____________________  
Answer: ____________________
A two proportion, two-sided significance test is performed to compare medications to eliminate toe jam. Researches want to increase the power of the test and decide to use an $\alpha = 0.12$ level of significance instead of the standard $\alpha = 0.05$. What is the probability of a Type I error for this larger significance level?

Answer: ________________

Round 1 2 3 4 5
The Colorado Rockies win 60% of their home baseball games. Assuming the results of each game are independent, what is the probability that the Rockies win exactly 2 of the next 4 games?

Answer: ________________

Round 1 2 3 4 5

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Round 1 2 3 4 5
The following two-word phrase is synonymous with the word disjoint. Each instance of a missing traditional consonant is worth 3 points and each instance of a missing traditional vowel is worth 5 points. Find the mean of the point values of the missing letters.

_ _ t _ al _ _ _ _ cl _ s _ v _

Answer: ________________

Round 1 2 3 4 5

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_ _ t _ al _ _ _ _ cl _ s _ v _

Answer: ________________

Round 1 2 3 4 5
The following regression line is used to model the linear relationship between the number of manatee deaths and number of powerboats registered. Use this line to determine the residual value at the point (3, 26)

\[ \hat{y} = -1.5 + 11x \]

\( y \) = number of manatee deaths  
\( x \) = number of powerboats registered

Answer: ________________

Round 1 2 3 4 5
The five-number summary for the number of marijuana related traffic accidents per month is given below. Use this summary to calculate the smallest integer value that would be considered a HIGH Outlier.

\[ \text{MIN} = 12 \quad Q_1 = 22 \]
\[ \text{MED} = 25 \quad Q_3 = 32 \quad \text{MAX} = 55 \]

Answer: ________________

Round 1 2 3 4 5
What is the probability that a randomly selected unique positive integral factor of 100 is less than 21?

Answer: ________________

Round 1 2 3 4 5

Answer: ________________

Round 1 2 3 4 5
Let $X$ be a random variable defined as the number shown on a single roll of a fair die. Find the variance of $X$.

Answer: ______________________

Round  1  2  3  4  5
A 95% Confidence Interval is constructed to estimate the average unweighted GPA of all high school seniors in Alachua County Public Schools. The interval is $2.34 , 2.76$. What is the margin of error?

Answer: ________________________

Round  
1 2 3 4 5
30.25% of the variability in body mass index is explained by the negatively sloped Least Squares Regression Line of body mass index versus hours spent exercising per week. Calculate the correlation coefficient.

Answer: ________________________
Round    1    2    3    4    5
How many odd numbers are there in the first 2018 terms of the Fibonacci sequence? The first two terms are both 1.

Answer: ________________  

Round  
1  2  3  4  5  

Answer: ________________  

Round  
1  2  3  4  5
How many different 3-letter “words” (nonsensical ones are OK) can be formed such that each word has 3 different letters in increasing alphabetical order?

Answer: ________________________

Round 1 2 3 4 5

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Answer: ________________________

Round 1 2 3 4 5
Scores on an ACT test are normally distributed with a mean of 21 and a standard deviation of 4. Viraj’s standard normal score on this ACT test was -0.5. What was his actual ACT score?

Answer: ________________________

Round 1 2 3 4 5
A class has 30 students and a simple random sample of 5 students must be chosen. The students are labeled 01, 02, 03, ...., 30. Using the line of random digits below, what is the third student selected?

14459 26056 31424 80371 65103 62253

Answer: ________________________

Round 1 2 3 4 5
An experiment uses different combinations of fertilizer (0 cups, 1 cup, 2 cups) and mulch (none, wood, rubber, plastic) to determine the best yield for plants. 60 plants are available for the experiment. Each treatment will have an equal amount. How many will be assigned to each treatment?

Answer: ________________

Round 1 2 3 4 5

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Answer: ________________

Round 1 2 3 4 5
The probability that a visit to a primary care physician’s (PCP) office results in neither lab work nor referral to a specialist is 35%. Of those coming to a PCP’s office, 30% are referred to specialists and 40% require lab work.

Determine the probability that a visit to a PCP’s office results in both lab work and referral to a specialist.

Answer: ________________________
If a fair coin is tossed five times, what is the probability that at least two of the tosses are heads?

Answer: ________________________

Round    1    2    3    4    5

Answer: ________________________

Round    1    2    3    4    5
A probability density function is modeled by a triangle with base length of 1.2. What is the height of the triangle?

Answer: ________________________

Round  1  2  3  4  5
Compute the degrees of freedom for a Chi
Square Test for Independence if a two way
table with Smoking Status and Education Level
as the categorical variables has 3 rows and 4
columns.

Answer : ________________________
Round  1  2  3  4  5

Answer : ________________________
Round  1  2  3  4  5
The median of the list \( n, n+2, n+3, n+5 \) is equal to 10. What is the mean?

**Answer:**

Round 1 2 3 4 5
A one-sided hypothesis test uses an $\alpha = .05$ level of significance. The sample size used is 60. The sum of Type I error and Type II error for this test is .22. Using these values, compute the power of this test.

Answer: ________________________

Round 1 2 3 4 5
A number is chosen at random from among the 30 smallest natural numbers. What is the probability it is a prime number?

Answer: ________________________

Round 1 2 3 4 5
Adam chooses the vertices of a triangle randomly from a set of 8 points in space, no three of which are collinear. Richard makes the same type of random choice. What is the probability they end up with the same triangle?

Answer: ________________

Round  1  2  3  4  5