Question 1

During its grand opening week, Stickler's bicycle shop offers a "wheel of discount savings". After customers select the items they wish to purchase, they spin the wheel to determine the discount they will receive. The wheel is divided into 12 slices. Six slices are red and award a 10% discount, three slices are white and award a 20% discount, and two slices are blue and award a 40% discount. The remaining slice is gold and awards a 100% discount!
a. What is the probability that a customer gets at least a 40% discount?
b. What is the probability that a customer does not get at least a 40% discount?
c. What is the probability that a customer gets a 10% or 20% discount?
d. What is the probability that two customers in a row get a 20% discount?
Answer: https://biology-forums.com/index.php?topic=760192

Question 2

Consider the following sample data. The standard deviations from the data are 3.67 for Y, and 45.28 for X. These sample data are shown as follows:
Y X
10 100
7 110
12 90
15 200
16 150
Given this data, the sample correlation is approximately
A) 0.6770
B) 0.5416
C) 0.1565
D) 0.3585
E) 0.1956
Answer: https://biology-forums.com/index.php?topic=760168

Question 3

Suppose the administration decides to do the following. At a Starbucks located on campus, every tenth person who enters on a Monday morning is selected to be surveyed. Explain why this may be biased.
Answer: https://biology-forums.com/index.php?topic=760074

Question 4

A recent survey of local cell phone retailers showed that of all cell phones sold last month, 64% had a camera, 28% had a music player, and 22% had both.
a. What is the probability that a cell phone sold last month had a camera or a music player?
b. What is the probability that a cell phone sold last month did not have either a camera or a music player?
c. Are the events of a cell phone having a camera and a music player disjoint or mutually exclusive? Explain.
Answer: https://biology-forums.com/index.php?topic=760194

Question 5

One member of the management team at ASW suggests that their survey could be conducted online. Customers logging on to the online store would be asked to take a few minutes to complete the survey and would be offered a coupon as incentive to participate. Which of the following statements is true?
A) This is a voluntary response sample.
B) This would result in an unbiased random sample.
C) This would result in a biased sample.
D) Both A and B
E) Both A and C
Answer: https://biology-forums.com/index.php?topic=760087

Question 6

Find each of the following percentages.
a. What percentage of the responses were males who prefer Pentax?
b. What percentage of the male responses prefer Pentax?
c. What percentage of the consumers who chose Pentax were males?
Answer: https://biology-forums.com/index.php?topic=760108

Question 7

When a tax auditor randomly selects 20 accounts from all the accounts of a business to check for accuracy, she has selected
A) a sample from a population
B) a census
C) a convenience sample
D) a biased sample
E) a stratified sample
Answer: https://biology-forums.com/index.php?topic=760093

Question 8

In commenting on the increase in home foreclosures, a news reporter stated "there appears to be a strong correlation between home foreclosures and job loss of the head of household." Comment on this statement.
Answer: https://biology-forums.com/index.php?topic=760151

Question 9

The residual for the estimated tip for a total bill of $120 would be
A) $5.13
B) $19.00
C) 0
D) -$11.45
E) $9.38
Answer: https://biology-forums.com/index.php?topic=760188

Question 10

The table below shows data on total assets ($ million) for a sample of a bank's branches.
BRANCH ASSETS ($ million)
1 88
2 80
3 58
4 92
5 81
6 70
7 89
8 84
For the data on total assets ($ million) for the sample provided:
a. Calculate the mean.
b. Calculate the standard deviation.
c. Standardize the asset value of the third branch (find the z score). Interpret its meaning.
Answer: https://biology-forums.com/index.php?topic=760131

Question 11

Suppose that ASW's regular customers belong to a rewards program and have a customer rewards ID number. ASW decides to randomly select 100 numbers. This sampling plan is called
A) Simple Random Sampling
B) Stratified Sampling
C) Cluster Sampling
D) Systematic Sampling
E) Convenience Sampling
Answer: https://biology-forums.com/index.php?topic=760083

Question 12

Consumer Reports Health routinely compares drugs in terms of effectiveness and safety. Suppose that in the summer of 2010 they reviewed drugs used to treat arthritis. Information was reported on convenience of use (how many pills required each day), possible side effects (e.g., dizziness, stomach upset), cost, and ratings of effectiveness in relieving symptoms (very effective, somewhat effective, not effective). Describe the W's for the information given.
• Who:
• What:
• When:
• Where:
• How:
• Why:
Answer: https://biology-forums.com/index.php?topic=760049

Question 13

Tim Hortons conducts a random survey of 1000 customers in their Ottawa outlets on a particular day. For each customer they collect data on the time taken to fill the order, how frequently the customer comes to Tim Hortons in a week, whether the customer purchased only coffee or additional item(s), and the level of overall satisfaction using a scale from 1 to 5. Which of the variables is quantitative?
A) the time taken to fill the order, and how frequently the customer comes to Tim Hortons in a week
B) whether the customer purchased only coffee or additional item(s)
C) the level of overall satisfaction
D) whether the customer purchased only coffee or additional item(s) and the level of overall satisfaction
E) the level of overall satisfaction and how frequently the customer comes to Tim Hortons in a week
Answer: https://biology-forums.com/index.php?topic=760070

Question 14

An attribute of a sample is called a
A) parameter
B) statistic
C) real number
D) integer
E) census
Answer: https://biology-forums.com/index.php?topic=760099

Question 15

One member of the management team at ASW suggests that their survey could be conducted online. Customers logging on to the online store would be asked to take a few minutes to complete the survey and would be offered a coupon as incentive to participate. Explain how this approach might be biased.
Answer: https://biology-forums.com/index.php?topic=760079

Question 16

What is the marginal distribution of brands?
Answer: https://biology-forums.com/index.php?topic=760103

Question 17

Which of the following is a secondary data source?
A) using Statistics Canada data
B) conducting a telephone survey
C) conducting a mail out written survey
D) conducting personal interviews
E) conducting an experiment
Answer: https://biology-forums.com/index.php?topic=760072

Question 18

Write a sentence or two about the conditional relative frequency distribution of mode of investment for clients age 50 or younger.
Answer: https://biology-forums.com/index.php?topic=760116

Question 19

If a distribution for a quantitative variable is thought to be nearly symmetric with very little variation, and a boxplot is created for this distribution, which of the following is true?
A) The box will be quite wide but the whiskers will be very short.
B) The whiskers will be about half as long as the box is wide.
C) There will be no whiskers.
D) The lower whisker will be the same length as the upper whisker.
E) The left and right-hand edges of the box will be approximately equal distance from the median.
Answer: https://biology-forums.com/index.php?topic=760140

Question 20

In addition to the variables listed above, data were also collected on the variables listed below. Indicate whether each is nominal or ordinal.
• Region (Urban, Suburban, Rural)
• Education (Less than High School, High School, College, University)
• Marital Status (Single, Widowed, Divorced, Married)

Answer: https://biology-forums.com/index.php?topic=760047