1. A set of data has values that vary from 11.6 to 97.8. If these values are grouped into nine classes, What class width should you choose?

   (a) 10 _____(correct)

   (b) 9

   (c) 11

   (d) 8

   (e) 86

2. The following is a stem-and-leaf display representing the amount of gasoline purchased, in gallons (with leaves in tenths of gallons), for a sample of 25 cars that use a particular service station on the New Jersey Turnpike:

```
 9 | 1 4 7
10 | 0 2 2 3 8
11 | 1 2 5 5 6 6 7 7 7
12 | 2 2 3 4 8 9
13 | 0 2
```

   What amount of gasoline (in gallons) is most likely to be purchased?

   (a) 11.7 _____(correct)

   (b) 1.17

   (c) 117

   (d) 0.117

   (e) 13.2

3. According to the U.S. Census Bureau, in February 2010, the median sales price of new houses was \$220,500 and the mean sales price was \$282,600. What is the shape of the distribution of the price of new houses?

   (a) Right Skewed _____ (correct)
   (b) Left Skewed
   (c) Negatively Skewed
   (d) Symmetric
   (e) Bell Shape

4. The following is a set of data from a sample of $n = 5$:

   $$7 \quad -5 \quad -8 \quad 7 \quad 9$$

   What is value of inter-quartile range?

   (a) 14.5 _____ (correct)
   (b) -14.5
   (c) 8.0
   (d) 1.5
   (e) -6.5

5. The following is a set of data for a population with $N = 10$:

   7 5 6 6 6 4 8 6 9 3

   Compute the population standard deviation.

   (a) 1.67 (correct)
   (b) 2.80
   (c) 1.76
   (d) 7.84
   (e) 6.00

6. The following set of data is from a sample of $n = 7$:

   12 7 4 9 0 7 3

   Using Z score method, how many outliers are there in the data?

   (a) 0 (correct)
   (b) 2
   (c) 1
   (d) 7
   (e) 3

7. A sample of 500 respondents in a large metropolitan area was selected to study consumer behavior. Among the questions asked was "*Do you enjoy shopping for clothing*?" Of 240 males, 136 answered `yes`. Of 260 females, 224 answered `yes`. Construct a contingency table to evaluate the probabilities. What is the probability that a respondent chosen at random is a female or enjoys shopping for clothing?

   (a) 0.792 _____(correct)
   (b) 0.720
   (c) 0.520
   (d) 0.448
   (e) 0.208

8. If $P(A) = 0.3, P(B) = 0.4$, and $P(A \text{ and } B) = 0.2$, Which statement is true about events A and B?

   (a) Events are dependent and non-mutually exclusive _____(correct)
   (b) Events are dependent and mutually exclusive
   (c) Events are independent and non-mutually exclusive
   (d) Events are independent and mutually exclusive
   (e) Events A and B are complements of each other

9. If $P(B) = 0.05$, $P(A \mid B) = 0.80$, $P(B') = 0.95$, and $P(A \mid B') = 0.40$, find $P(B \mid A)$.

(a) 0.095 _____ (correct)

(b) 0.040

(c) 0.420

(d) 0.905

(e) 0.380

10. The editor of a textbook publishing company is trying to decide whether to publish a proposed business statistics textbook. Information on previous textbooks published indicates that 10% are huge successes, 20% are modest successes, 40% break even, and 30% are losers. However, before a publishing decision is made, the book will be reviewed. In the past, 99% of the huge successes received favorable reviews, 70% of the moderate successes received favorable reviews, 40% of the break-even books received favorable reviews, and 20% of the losers received favorable reviews. What proportion of textbooks receives favorable reviews?

(a) 0.459 _____ (correct)

(b) 0.541

(c) 0.573

(d) 0.399

(e) 0.400

11. The increase or decrease in the price of a stock between the beginning and the end of a trading day (5 trading days) is assumed to be an equally likely random event. What is the probability that a stock will show an increase in its closing price on five consecutive days?

(a) 0.0313 (correct)

(b) 0.9688

(c) 0.2

(d) 0.8

(e) 0.5

12. Based on past experience, it is assumed that the number of flaws per foot in rolls of grade 2 paper follows a Poisson distribution with a mean of 1 flaw per 5 feet of paper (0.2 flaw per foot). What is the probability that in a 12-foot roll, there will be at least 1 flaw?

(a) 0.9093 (correct)

(b) 0.0907

(c) 0.2177

(d) 0.2134

(e) 0.3084

13. A toll-free phone number is available from 9 A.M. to 9 P.M. for your customers to register complaints about a product purchased from your company. Past history indicates that an average of 0.8 calls is received per minute. What is the maximum number of phone calls that will be received in a one-minute period 99.99% of the time?

(a) 6 _____(correct)

(b) 5

(c) 3

(d) 2

(e) 1

14. From an inventory of 30 cars being shipped to a local automobile dealer, 4 are SUVs. If 4 cars arrive at a particular dealership, What is the probability that at least 1 is an SUV?

(a) 0.4545 _____(correct)

(b) 0.5455

(c) 0.4358

(d) 0.3795

(e) 0.1333