

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.

The table below shows Joe's golf scores from Saturday.

Golf Score	Frequency
2	5
3	8
4	11
5	5
6	3
7	1
8	2
9	1

- 1) Joe's average golf score on Saturday was 1) _____
A) 4.25.
B) 4.
C) 3.75.
D) 4.5.
E) none of these
- 2) Joe's median golf score on Saturday was 2) _____
A) 4.25.
B) 4.
C) 3.75.
D) 4.5.
E) none of these
- 3) The first quartile of golf scores is 3) _____
A) 3.5.
B) 3.
C) 2.5.
D) 4.
E) none of these
- 4) The third quartile of golf scores is 4) _____
A) 6.5.
B) 6.
C) 5.
D) 5.5.
E) none of these
- 5) The range of golf scores was 5) _____
A) 7.
B) 9.
C) 8.
D) 10.
E) none of these

The table below shows the scores of a group of students on a 10 point multiple choice placement test.

Exam Score	Frequency
3	5
4	3
5	5
6	2
7	7
8	6
9	1
10	1

6) The average score on the test is

- A) 6.5.
- B) 5.
- C) 5.5.
- D) 6.
- E) none of these

6) _____

7) The median score on the test is

- A) 5.
- B) 6.5.
- C) 6.
- D) 5.5.
- E) none of these

7) _____

8) The first quartile on the test is

- A) 5.
- B) 4.
- C) 4.5.
- D) 5.5.
- E) none of these

8) _____

9) The third quartile on the test is

- A) 7.5.
- B) 7.
- C) 6.5.
- D) 8.
- E) none of these

9) _____

10) The range on the test is

- A) 8.
- B) 7.
- C) 9.
- D) 10.
- E) none of these

10) _____

Use the data set $\{-100, -99, -98, \dots, -2, -1\}$ to answer the following question(s).

11) The data set has a mean of

11) _____

- A) -49.5.
- B) -51.
- C) -50.
- D) -50.5.
- E) none of these

12) The data set has a median of

12) _____

- A) -49.5.
- B) -50.
- C) -51.
- D) -50.5.
- E) none of these

Use the data set $\{-2, -3, 1, 8\}$ to answer the following question(s).

13) The mean of the data set is

13) _____

- A) 3.5.
- B) 1.
- C) 0.25.
- D) 4.
- E) none of these

14) The median of the data set is

14) _____

- A) -1.
- B) 2.
- C) -0.5.
- D) 0.
- E) none of these

15) The standard deviation of the data set is

15) _____

- A) 4.33.
- B) 4.301.
- C) 3.905.
- D) 18.5.
- E) none of these

Use the data set $\{d_1, d_2, d_3, \dots, d_{251}\}$ consisting of 251 numbers to answer the following question(s).

16) After sorting the data set (in increasing order from left to right), the median is

16) _____

- A) the number in the 126th position.
- B) the sum of all the numbers divided by 251.
- C) the number in the 125th position.
- D) the average of the numbers in the 125th and 126th positions.
- E) none of these

Use the data set $\{d_1, d_2, d_3, \dots, d_{255}\}$ consisting of 255 numbers to answer the following question(s).

17) After sorting the data set (in increasing order from left to right), the median is

17) _____

- A) the sum of all the numbers divided by 255.
- B) the number in the 127th position.
- C) the number in the 128th position.
- D) the average of the numbers in the 127th and 128th positions.
- E) none of these

Use the data set $\{0, 4, 4, 8, 4, 16\}$ to answer the following question(s).

18) The standard deviation of the data set is

18) _____

- A) 25.333.
- B) 13.266.
- C) 12.329.
- D) 152.
- E) none of these

Use the frequency table below to answer the following question(s).

Data Value	Frequency
2	5
3	5
5	45
7	5
8	5

19) The standard deviation of this data set is

19) _____

- A) 1.414.
- B) 1.581.
- C) 1.225.
- D) 1.732.
- E) none of these

A pair of honest dice is rolled, and the number on each die is noted.

20) How many different outcomes are there in the sample space?

20) _____

- A) 64
- B) 30
- C) 12
- D) 6
- E) none of these

Solve the problem.

21) A fair coin is tossed 5 times and heads or tails is noted on each toss. How many different outcomes are there in the sample space?

21) _____

- A) 25
- B) 10
- C) 32
- D) 2
- E) none of these

A license plate consists of any five capital letters from the ordinary English alphabet (A through Z) except for the letters O, I, and Q.

22) How many of the license plates start with the letter Z? 22) _____

- A) 22^5
- B) $23 \times 22 \times 21 \times 20$
- C) $23^5 - 1$
- D) 23^4
- E) none of these

23) How many of the license plates start with the letter Z and end with the letter W? 23) _____

- A) 23^3
- B) 21^5
- C) $23 \times 22 \times 21^3$
- D) 21^3
- E) none of these

Tasmanian automobile license plates consist of four capital letters (A through Z) followed by three digits (0 through 9).

24) How many different Tasmanian license plates are possible? 24) _____

- A) $26^4 \times 10^3$
- B) 36^7
- C) $(26 \times 4) + (10 \times 3)$
- D) $26^4 + 10^3$
- E) none of these

25) How many Tasmanian license plates end with '66'? 25) _____

- A) $26^4 \times 10^3 - 1$
- B) $26^4 \times 10^3$
- C) $26^2 \times 10^3$
- D) $26^4 \times 10$
- E) none of these

26) How many Tasmanian license plates start with the word MATH? 26) _____

- A) 1000
- B) 10
- C) 1
- D) 100
- E) none of these

A computer password is made up of four characters. Each character can be a capital letter (A through Z), a lowercase letter (a through z) or a digit (0 through 9).

27) How many different such computer passwords are there? 27) _____

- A) 46^2
- B) 62^4
- C) 62×4
- D) $2 \times 26^4 + 10^4$
- E) none of these

28) How many passwords do not start with the digit 0?

28) _____

- A) 62^3
- B) 61^4
- C) 61×62^3
- D) $62^4 - 1$
- E) none of these

Solve the problem.

29) $8P_3 =$

29) _____

- A) 336
- B) 6720
- C) 512
- D) 56
- E) none of these

30) $10P_{10} =$

30) _____

- A) 1
- B) $10!$
- C) 10^2
- D) $\frac{10!}{10! 0!}$
- E) none of these

31) $8C_5 =$

31) _____

- A) 336
- B) 56
- C) 6720
- D) 26
- E) none of these

32) $15C_{15} =$

32) _____

- A) $15!$
- B) 0
- C) 15
- D) 1
- E) none of these

33) Three cards are drawn in order from a well shuffled deck of 52 cards. The probability that all three cards are clubs is given by 33) _____

A) $\frac{3 \times 13C_1}{52C_3}$.

B) $\frac{3 \times 13P_1}{52P_3}$.

C) $\frac{13C_3}{52C_3}$.

D) $\frac{13P_3}{52P_3}$.

E) none of these

Tasmanian automobile license plates consist of four capital letters (A through Z) followed by three digits (0 through 9).

34) How many Tasmanian license plates have no repeated symbols (different letters and different digits)? 34) _____

A) 25^7

B) $26P_4 \times 10P_3$

C) $26C_4 \times 10C_3$

D) $(26^4 - 1) \times (10^3 - 1)$

E) none of these

Solve the problem.

35) Consider the sample space $S = \{o_1, o_2, o_3, o_4\}$. Suppose you are given $\Pr(o_1) = 0.35$ and $\Pr(o_2) = 0.25$. If o_3 and o_4 have the same probability, find $\Pr(o_3)$. 35) _____

A) 0.2

B) 0.4

C) 0.1

D) 0.3

E) none of these

A pair of honest dice is rolled, and the number on each die is noted.

36) What is the probability of rolling a total of 2? 36) _____

A) $\frac{1}{36}$

B) $\frac{1}{18}$

C) $\frac{1}{3}$

D) $\frac{1}{6}$

E) none of these

37) What is the probability of rolling a total of 7?

37) _____

A) $\frac{1}{3}$

B) $\frac{7}{36}$

C) $\frac{1}{36}$

D) $\frac{1}{6}$

E) none of these

Solve the problem.

38) Three cards are drawn in order from a well shuffled deck of 52 cards. The probability that all three cards are 9's is given by 38) _____

A) $\left(\frac{4}{52}\right) \times \left(\frac{3}{52}\right) \times \left(\frac{2}{52}\right)$.

B) $\left(\frac{4}{52}\right) \times \left(\frac{4}{51}\right) \times \left(\frac{4}{50}\right)$.

C) $\left(\frac{4}{52}\right)^3$.

D) $\left(\frac{4}{52}\right) \times \left(\frac{3}{51}\right) \times \left(\frac{2}{50}\right)$.

E) none of these

39) Three cards are drawn in order from a well shuffled deck of 52 cards. The probability that all three cards are clubs is given by 39) _____

A) $\left(\frac{13}{52}\right) \times \left(\frac{12}{52}\right) \times \left(\frac{11}{52}\right)$.

B) $\left(\frac{13}{52}\right) \times \left(\frac{12}{51}\right) \times \left(\frac{11}{50}\right)$.

C) $\left(\frac{13}{52}\right) \times \left(\frac{13}{51}\right) \times \left(\frac{13}{50}\right)$.

D) $\left(\frac{13}{52}\right) \times \left(\frac{12}{51}\right)$.

E) none of these

Answer Key

Testname: EX5EXTRASAMPLE

- 1) A
- 2) B
- 3) B
- 4) C
- 5) A
- 6) D
- 7) B
- 8) B
- 9) D
- 10) B
- 11) D
- 12) D
- 13) B
- 14) C
- 15) B
- 16) A
- 17) C
- 18) E
- 19) A
- 20) E
- 21) C
- 22) D
- 23) A
- 24) A
- 25) D
- 26) A
- 27) B
- 28) C
- 29) A
- 30) B
- 31) B
- 32) D
- 33) D
- 34) B
- 35) A
- 36) A
- 37) D
- 38) D
- 39) B