Math 1324 - Final Exam Review

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

Provide an appropriate response.

1) Given the frequency distribution below, what is the probability of the hourly wage of a person chosen at random from the sample being less than $4.495? 1) _____

Hourly Wage of Part-time Fast Food Service Workers

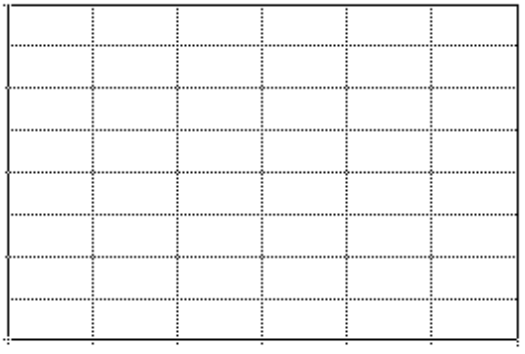
Class Interval	Frequency
2.995-3.495	5
3.495-3.995	55
3.995-4.495	20
4.495-4.995	15
4.995-5.495	5

A) 0.75 B) 0.08 C) 0.20 D) 0.80

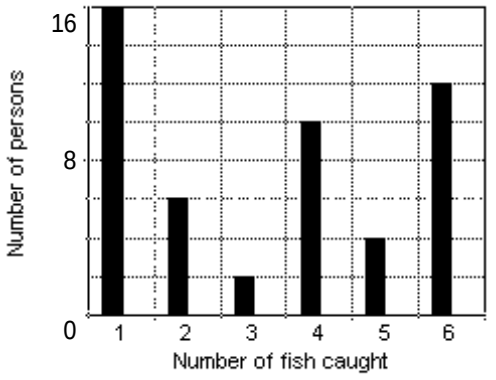
Construct a bar graph of the given frequency distribution.

2) The frequency distribution indicates the number of fish caught by each fisherman in a group of 50 fishermen. 2) _____

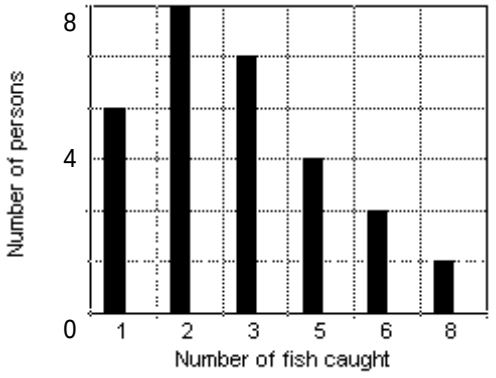
Number of fish caught	Number of persons
1	16
2	12
3	10
4	2
5	6
6	4



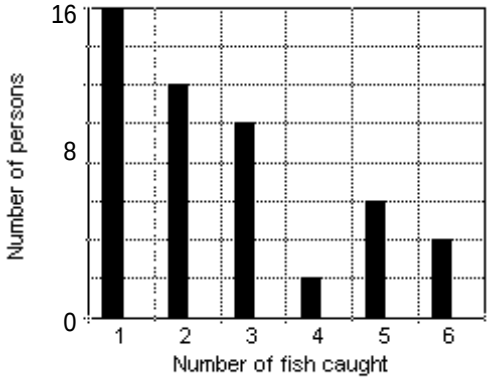
A)


16
8
0
Number of persons
1
2
3
4
5
6
Number of fish caught

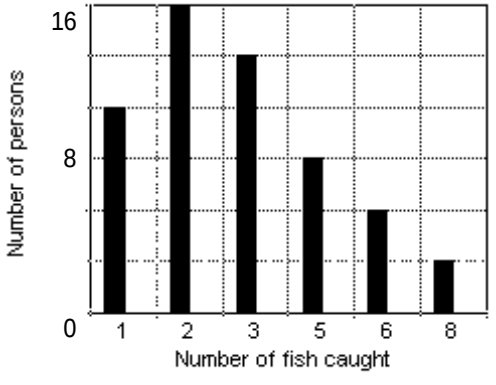
B)


8
4
0
Number of persons
1
2
3
5
6
8
Number of fish caught

C)


16
8
0
Number of persons
1
2
3
4
5
6
Number of fish caught

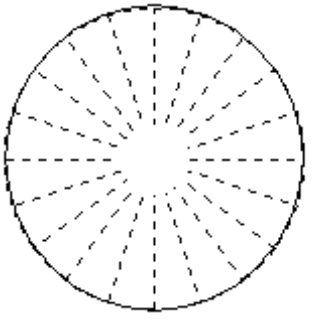
D)


16
8
0
Number of persons
1
2
3
5
6
8
Number of fish caught

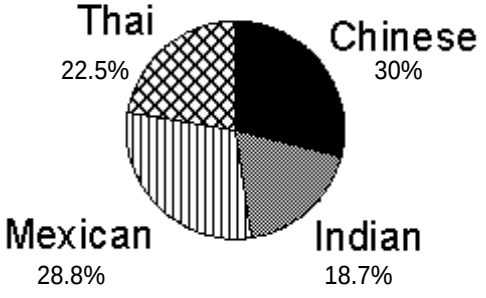
Construct a pie graph, with sectors given in percent, to represent the data in the given table.

3) 3) _____

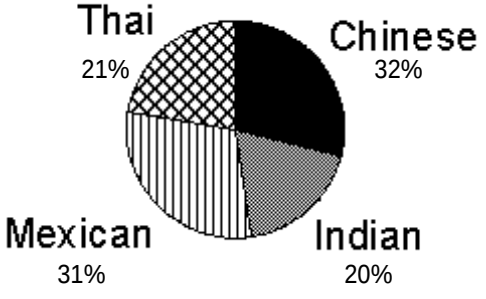
Favorite Restaurant Style	Number of Responses
Chinese	46
Indian	30
Mexican	48
Thai	36



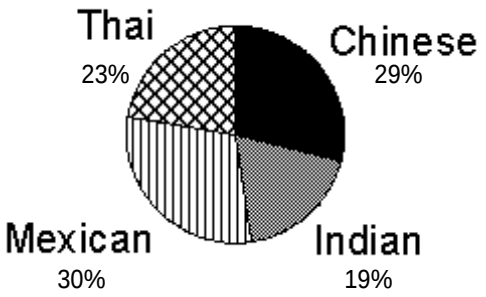
A)



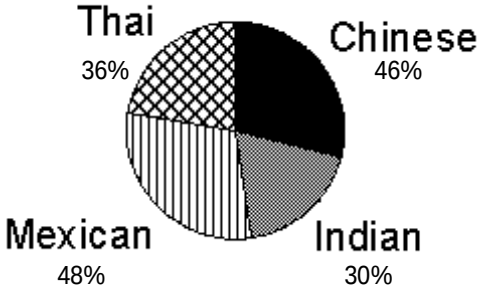
B)



C)



D)



Find the mean for the data set.

4) A small company employs a supervisor at $1200 a week, an inventory manager at $800 a week, 5 stock boys at $400 a week each, and 3 drivers at $700 a week each. 4) _____

A) $610 B) $1017 C) $1260 D) $550

Provide an appropriate response.

5) Find the mean for the following grouped data. 5) _____

Interval	Frequency
5.5-9.5	3
9.5-13.5	1
13.5-17.5	5
17.5-21.5	7
21.5-25.5	4

A) 15.5 B) 19.5 C) 17.1 D) 7.5

6) Find the median for the data set: 6) _____
2, 14, 35, 2, 8, 35, 14, 8, 6, 2, 2, 2, 2, 8, 2

A) 14.25 B) 9.47 C) 6 D) 8

7) Find the median for the following grouped data. 7) _____

Interval	Frequency
2.5-4.5	1
4.5-6.5	8
6.5-8.5	4
8.5-10.5	5
10.5-12.5	3

A) 11.5 B) 9.5 C) 7.60 D) 7.25

8) Find the mode for the data set: 8) _____
2, 11, 35, 2, 9, 35, 11, 9, 7, 2, 2, 2, 2, 9, 2
A) 9.3 B) 7 C) 11 D) 2

9) Here are the prices for 8 different MP3 players. Find the standard deviation. 9) _____

$195 $358 $201 $276 $161 $301 $387 $128
Round to one decimal place.
A) 238.5 B) 94.1 C) 144.5 D) 329.5

10) What proportion of the following sample of ten measurements lies within 2 standard deviations of the mean? 10) _____

1	5	9	2	6
3	3	4	5	2

A) 70% B) 90% C) 80% D) 100%

11) The test scores of 40 driver license applicants are summarized in the frequency table below. Find the standard deviation. 11) _____

Score	Students
50 - 59	8
60 - 69	7
70 - 79	12
80 - 89	7
90 - 99	6

Round your answer to one decimal place.
A) 13.4 B) 14.1 C) 12.1 D) 12.7 E) 12.0

12) Here are the prices for 8 different MP3 players. Find the range. 12) _____

$195 $358 $201 $276 $161 $301 $387 $128

A) 230 B) 195 C) 259 D) 200

Evaluate $C_{n,x}p^xq^{n-x}$ for the given values of n, x, and p.

13) $n = 6, x = 3, p = \frac{1}{6}$ 13) _____

A) 0.0286 B) 0.0154 C) 0.0536 D) 0.0322

Provide an appropriate response.

14) If a baseball player has a batting average of 0.420, what is the probability that the player will get at least 2 hits in the next four times at bat? 14) _____

A) 0.333 B) 0.559 C) 0.50 D) 0.042

15) A test consists of 10 true/false questions. To pass the test a student must answer at least 7 questions correctly. If a student guesses on each question, what is the probability that the student will pass the test? 15) _____

A) 0.055 B) 0.117 C) 0.945 D) 0.172

16) According to a college survey, 22% of all students work full time. Find the mean for the random variable X, the number of students who work full time in samples of size 16.
Find the mean of the binomial distribution. 16) _____

A) 3.52 B) 2.75 C) 0.22 D) 4.00

17) A normal distribution has mean 200 and standard deviation 50. Find the area under the normal curve from the mean to 224. 17) _____

A) 0.5000 B) 0.6844 C) 0.1844 D) 0.6808

Given a normal distribution with mean 120 and standard deviation 5, find the number of standard deviations the measurement is from the mean. Express the answer as a positive number.

18) 134.9 18) _____

A) 3.25 B) 3.02 C) 2.18 D) 2.98

Estimate the indicated probability by using the normal distribution as an approximation to the binomial distribution.

19) In one county, the conviction rate for DUI is 85%. Estimate the probability that of the next 100 DUI summonses issued, there will be at least 90 convictions. 19) _____

A) 0.0420 B) 0.3962 C) 0.1038 D) 0.8962

Assume the distribution is normal. Use the area of the normal curve to answer the question. Round to the nearest whole percent.

20) A machine produces screws with an average diameter of 0.30 inches and a standard deviation of 0.01 inches. What is the probability that a screw will have a diameter greater than 0.32 inches? 20) _____

A) 97% B) 2% C) 1% D) 3%

Answer Key
Testname: 1324-SU17-FINALREVIEW

1) D
2) C
3) C
4) A
5) C
6) C
7) D
8) D
9) B
10) B
11) A
12) C
13) C
14) B
15) D
16) A
17) C
18) D
19) C
20) B