Math 1324 – Finite
Professor: Fred Khoury

Practice Exam 4

1) Prepare a frequency distribution with a column for intervals and frequencies 1) _____
Use five intervals, starting with 0 – 4.
3 5 14 18 21 21 18 13 9 3 7 13 16 23 17 14 4 10 15 19

A)

Interval	Frequency
0 – 4	3
5 – 9	3
10 – 14	5
15 – 19	6
20 – 24	3

B)

Interval	Frequency
0 – 4	3
5 – 9	3
10 – 14	4
15 – 19	7
20 – 24	3

C)

Interval	Frequency
0 – 4	3
5 – 9	3
10 – 14	5
15 – 19	5
20 – 24	4

D)

Interval	Frequency
0 – 4	3
5 – 9	2
10 – 14	6
15 – 19	6
20 – 24	3

2) Find the mean for the list of numbers; 17, 3, 24, 17 (Round to the nearest tenth, if necessary.) 2) _____

A) 13.8 B) 21.3 C) 15.3 D) 15.8

3) 3) _____

Value	Frequency
14	2
19	6
22	2
28	3
33	3

Find the mean. Round to the nearest tenth.

A) 7.2 B) 22.3 C) 23.1 D) 26.4

4) Find the median for the list of numbers.: 7, 7, 13, 23, 30, 41, 48 4) _____

A) 23 B) 13 C) 24 D) 30

5) Find the median for the list of numbers.: 1, 7, 11, 22, 35, 41, 47 5) _____

A) 23 B) 35 C) 22 D) 11

6) Find the range for the set of numbers: 6, 20, 2, 15, 10 6) _____

A) 20 B) 18 C) 4 D) 2

7) Find the range for the set of numbers: 7, 16, 3, 15, 9 7) _____

A) 3 B) 16 C) 2 D) 13

8) Find the indicated value for the data. 8) _____

253, 164, 422, 90, 331,
169, 250, 255, 335, 167,
94, 335, 172, 418, 87,
337, 170, 252, 173, 417
Find the mean. Round to four decimal places.

A) 38.5000 B) 244.5500
C) 245.0500 D) None of these

9) Find the indicated value for the data. 9) _____

247, 160, 412, 88, 323,
165, 244, 249, 327, 163,
92, 327, 168, 408, 85,
329, 166, 246, 169, 407
Find the mean. Round to four decimal places.

A) 239.2500 B) 38.5000
C) 238.7500 D) None of these

10) Find the standard deviation for the set of numbers. 6, 15, 17, 8, 10, 12, 8, 10, 15 10) _____

A) 1.4 B) 3.6 C) 4.0 D) 3.8

11) Find the standard deviation for the set of numbers. 5, 7, 10, 6, 10, 20, 8, 8, 13 11) _____

A) 4.9 B) 4.3 C) 4.6 D) 1.2

12) Find the mode or modes.: 20, 26, 46, 26, 49, 26, 49 12) _____

A) 49 B) 34.6 C) 26 D) No mode

13) Find the mode or modes.: 20, 21, 46, 21, 49, 21, 49 13) _____

A) 32.4 B) 49 C) 21 D) No mode

14) Find the standard deviation for the grouped data. 14) _____

Interval	Frequency
5001 – 10,000	18
10,001 – 15,000	11
15,001 – 20,000	13
20,001 – 25,000	14
25,001 – 30,000	24

A) 8145.9 B) 7758.0 C) 8378.6 D) 8611.3

15) The manager of an electrical supply store measured the diameters of the rolls of wire in the inventory. The diameters of the rolls (in m) are listed below. Find the standard deviation. Round your result to four decimal places. 15) _____

0.329 0.598 0.582 0.254 0.231 0.188 0.445

A) 0.2540 B) 0.1683 C) 0.9859 D) 1.1558

16) Find the percent of the area under a normal curve between the mean and the given number of standard deviations from the mean. 3.01 16) _____

A) 49.87% B) 50.13% C) 49.86% D) 99.87%

17) Find a z−score satisfying the given condition. 4% of the total area is to the left of z. 17) _____

A) 1.70 B) −1.75 C) −1.74 D) −1.76

18) A company installs 5000 light bulbs, each with an average life of 500 hours, standard deviation of 100 hours, and distribution approximated by a normal curve. Find the approximate number of bulbs that can be expected to last the specified period of time. At least 500 hours 18) _____

A) 2500 B) 1000 C) 5000 D) 2400

19) A company installs 5000 light bulbs, each with an average life of 500 hours, standard deviation of 100 hours, and distribution approximated by a normal curve. Find the approximate number of bulbs that can be expected to last the specified period of time. Between 500 hours and 675 hours 19) _____

A) 4800 B) 2256 C) 4700 D) 2300

20) A company installs 5000 light bulbs, each with an average life of 500 hours, standard deviation of 100 hours, and distribution approximated by a normal curve. Find the approximate number of bulbs that can be expected to last the specified period of time. Less than 690 hours 20) _____

A) 4853 B) 4857 C) 4860 D) 2357

21) A company installs 5000 light bulbs, each with an average life of 500 hours, standard deviation of 100 hours, and distribution approximated by a normal curve. Find the approximate number of bulbs that can be expected to last the specified period of time. More than 400 hours 21) _____

A) 4219 B) 4195 C) 4207 D) 2207

22) A machine produces bolts with an average diameter of 0.30 inch and a standard deviation of 0.01 inch. What is the probability that a bolt will have a diameter greater than 0.32 inch? 22) _____
Assume the distribution is normal. Use the area of the normal curve to answer the question. Round to the nearest whole percent.

A) 3% B) 98% C) 1% D) 2%

23) At one high school, girls can run the 100−yard dash in an average of 15.2 seconds with a standard deviation of 0.9 second. The times are very closely approximated by a normal curve. Find the percent of times that are: Greater than 15.2 seconds 23) _____

A) 68% B) 50% C) 48% D) 34%

24) The mean clotting time of blood is 7.35 seconds, with a standard deviation of 0.35 second. What is the probability that blood clotting time will be less than 7.0 seconds? 24) _____
Assume the distribution is normal. Use the area of the normal curve to answer the question. Round to the nearest whole percent.

A) 84% B) 15% C) 14% D) 16%

25) At one high school, girls can run the 100−yard dash in an average of 15.2 seconds with a standard deviation of 0.9 second. The times are very closely approximated by a normal curve. Find the percent of times that are: Between 14.3 and 16.1 seconds 25) _____

A) 50% B) 34% C) 47.5% D) 68%

26) If the life, in years, of a washing machine is normally distributed with a mean of 17 years and a standard deviation of 3.9 years, what should be the guarantee period if the company wants less than 1% of the machines to fail while under warranty? 26) _____

A) Less than 26.087 years
B) Less than 7.913 years
C) More than 7.913 years
D) More than 26.087 years

27) If the life of a car engine, calculated in miles, is normally distributed, with a mean of 160,000 miles and a standard deviation of 18,000 miles, what should be the guarantee period if the company wants less than 2% of the engines to fail while under warranty? 27) _____

A) Less than 108,160 miles
B) Less than 122,920 miles
C) Less than 144,880 miles
D) Less than 197,080 miles

Answer Key
Testname: FINITE_PRACTICE 4

1) A
2) C
3) C
4) A
5) C
6) B
7) D
8) B
9) C
10) D
11) C
12) C
13) C
14) B
15) B
16) A
17) B
18) A
19) D
20) B
21) C
22) D
23) B
24) D
25) D
26) B
27) B