

MGF 1106 College Mathematics
TEST 5

Name Form A KEY (scroll down for Form B KEY)

Date _____

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

1) We use statistics to make inferences about a :

- A) mean B) cluster C) sample D) population

1) D

Find the mean of the set of data.

2) 112, 48, 19, 46, 86, 26, 80, 110, 9

- A) 58.56 B) 50.5 C) 59.56 D) 67.5

2) C

Find the median of the set of data.

3) 6, 3, 23, 11, 24, 50, 34, 31

- A) 22.5 B) 23 C) 24 D) 23.5

3) D

Find the mode or modes for the set of numbers.

4) 94, 48, 32, 48, 29, 94

- A) 48 B) 94, 48 C) 57.50 D) 94

4) B

Find the range for the set of data given.

5) 118 483 200 594 404 286

- A) 86 B) 483 C) 476 D) 118

5) C

Find the standard deviation. Round to one more place than the data.

6) 19, 10, 6, 5, 16, 7, 9, 5, 14

- A) 4.8 B) 5.5 C) 1.3 D) 5.1

6) D

Solve the problem.

7) Sheryl's mean average on eight exams is 77. Find the sum of her scores.

- A) 639 B) 716 C) 616 D) 632

7) C

8) To get a C in history, Nandan must average 70 on four tests. Scores on the first three tests were 69, 79, and 60. What is the lowest score that Nandan can get on the last test and still receive a C?

- A) 70 B) 2 C) 69 D) 72

8) D

Provide an appropriate answer.

9) Use the following frequency distribution to determine the class limits of the next class if an additional class were to be added.

9) C

Class	Frequency
6-11	6
12-17	4
18-23	6
24-29	8
30-35	7
36-41	8

- A) 48-53 B) 43-48 C) 42-47 D) 42-48

Select the circle graph that best represents the information given in the table.

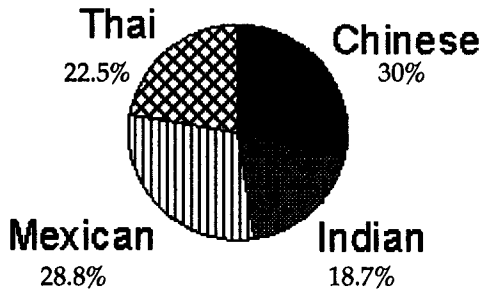
10)

10) D

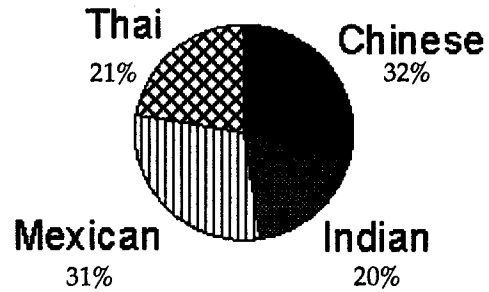
Favorite Restaurant Style Number of Responses

Chinese	69
Indian	45
Mexican	72
Thai	54

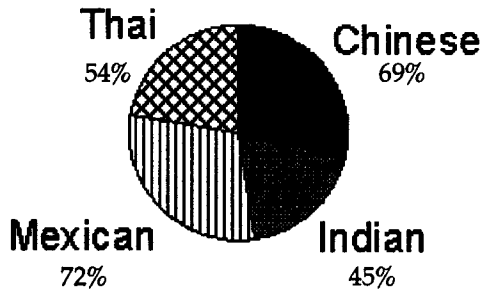
A)



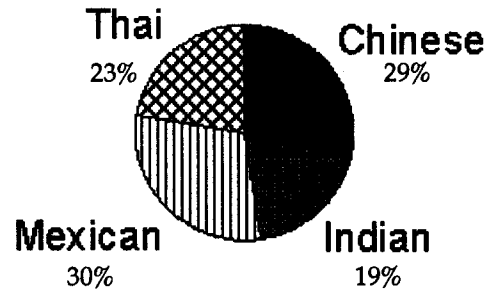
B)



C)



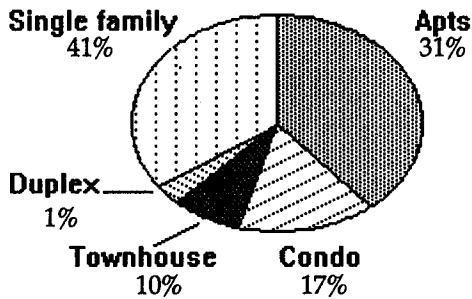
D)



Use the circle graph to solve the problem.

11) The circle graph shows the percent of the total population of 72,600 of Springfield living in the given types of housing. Round your result to the nearest whole number.

11) D



Find the number of people who live in condos.

A) 8712 people

B) 17 people

C) 60,258 people

D) 12,342 people

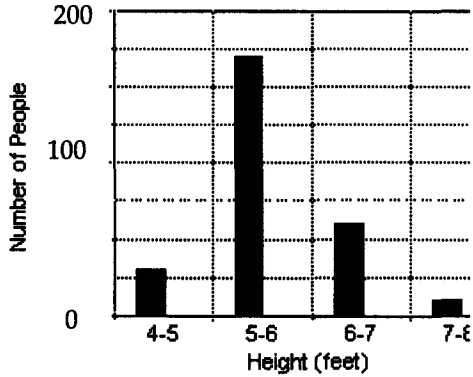
Select the bar chart that best represents the given frequency distribution.

12) The frequency distribution indicates the height in feet of persons in a group of 270 people.

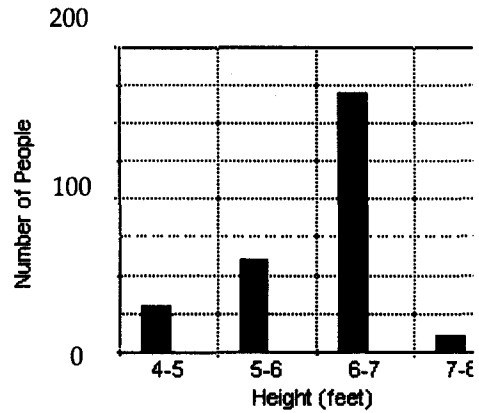
12) A

Height (feet)	Number of persons
4-5	30
5-6	170
6-7	60
7-8	10

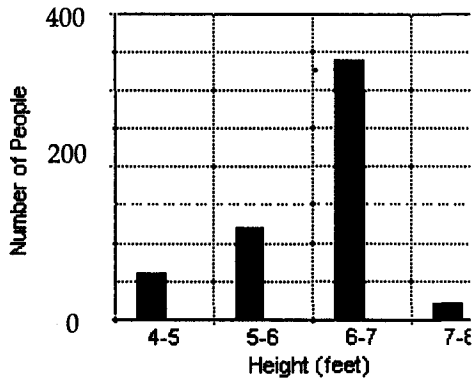
A)



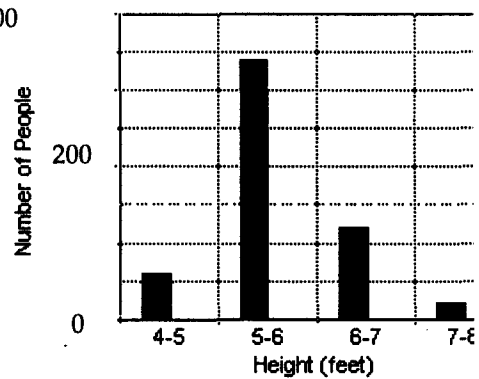
B)



C)



D)



Construct a stem-and-leaf display for the given data table.

13)

10 32 63 16 63 20
49 21 34 24 49 10
55 40 52 39 50 13

13) D

A) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 0\ 1\ 4 \\ 3 & 2\ 4\ 0\ 3 \\ 4 & 9\ 9\ 0 \\ 5 & 5\ 2\ 0\ 1 \\ 6 & 3\ 3 \end{array}$

B) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 0\ 1\ 4 \\ 3 & 2\ 4\ 9\ 5 \\ 4 & 9\ 9\ 0 \\ 5 & 5\ 2\ 0 \\ 6 & 3\ 3\ 2 \end{array}$

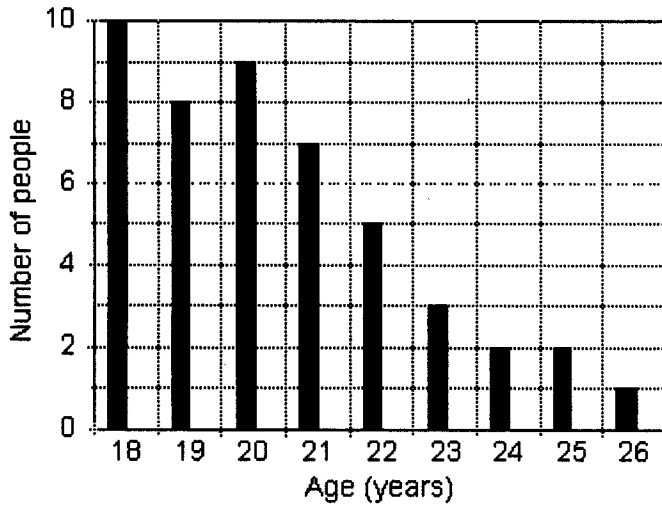
C) $\begin{array}{l|l} 1 & 0\ 4\ 0\ 3 \\ 2 & 0\ 1\ 4 \\ 3 & 4\ 6\ 9 \\ 4 & 9\ 9\ 0 \\ 5 & 5\ 9\ 0 \\ 6 & 3\ 3\ 8 \end{array}$

D) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 0\ 1\ 4 \\ 3 & 2\ 4\ 9 \\ 4 & 9\ 9\ 0 \\ 5 & 5\ 2\ 0 \\ 6 & 3\ 3 \end{array}$

Answer each question appropriately based on the corresponding bar chart.

14)

14) D



How many people were surveyed?

- A) 58 B) 45 C) 10 D) 47

Find the area under the normal curve for the condition.

15) Find the area between $z = 0.54$ and $z = 1.91$.

15) C

- A) 26.3% B) 26.6% C) 26.7% D) 23.3%

16) Find the area between $z = -2.49$ and $z = 1.19$.

16) D

- A) 11.3% B) 11.1% C) 86.8% D) 87.7%

17) Find the percent of the area between the mean and 1.64 deviations from the mean.

17) C

- A) 0.551 B) 0.950 C) 0.449 D) 0.453

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 percentage of bulbs that can be expected to last the period of time.

18) Less than 500 hours

18) A

- A) 50% B) 48% C) 20% D) 60%

19) Between 500 hours and 675 hours

19) D

- A) 45.12% B) 94% C) 96% D) 46%

20) Between 290 hours and 500 hours

20) D

- A) 58.26% B) 58.22% C) 48.26% D) 48.2%

MGF 1106 College Mathematics
TEST 5

Name Form BKEY

Date _____

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

1) We use statistics to make inferences about a :

- A) sample B) population C) cluster D) mean

1) B

Find the mean of the set of data.

2) 97, 39, 12, 65, 72, 55, 66, 97, 7

- A) ~~58.56~~ 56.67 B) 59.56 C) 50.5 D) 67.5

2) A

Find the median of the set of data.

3) 10, 4, 23, 17, 22, 50, 40, 38

- A) 23 B) 25.5 C) 22 D) 22.5

3) D

Find the mode or modes for the set of numbers.

4) 99, 38, 32, 38, 29, 99

- A) 99, 38 B) 99 C) 38 D) 55.83

4) A

Find the range for the set of data given.

5) 120 486 214 636 440 239

- A) 120 B) 25 C) 516 D) 486

5) C

Find the standard deviation. Round to one more place than the data.

6) 10, 8, 15, 12, 17, 20, 16, 17, 9

- A) 1.7 B) 4.2 C) 3.9 D) 4.5

6) B

Solve the problem.

7) Sheryl's mean average on eight exams is 77. Find the sum of her scores.

- A) 630 B) 623 C) 607 D) ~~787~~ 616

7) D

8) To get a C in history, Nandan must average 74 on four tests. Scores on the first three tests were 65, 78, and 63. What is the lowest score that Nandan can get on the last test and still receive a C?

- A) 16 B) 70 C) 90 D) 69

8) C

Provide an appropriate answer.

9) Use the following frequency distribution to determine the class limits of the next class if an additional class were to be added.

Class	Frequency
0-2	7
3-5	5
6-8	7
9-11	9
12-14	8
15-17	9

- A) 21-23 B) 18-20 C) 18-21 D) 19-21

9) B

Select the circle graph that best represents the information given in the table.

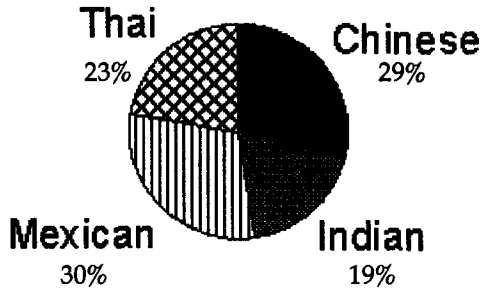
10)

Favorite Restaurant Style Number of Responses

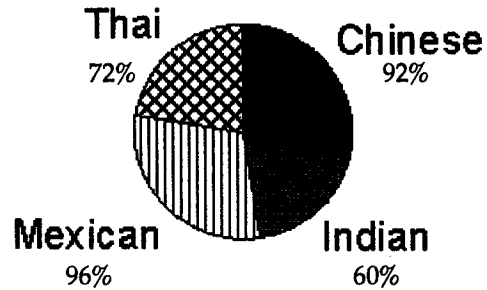
Chinese	92
Indian	60
Mexican	96
Thai	72

10) A

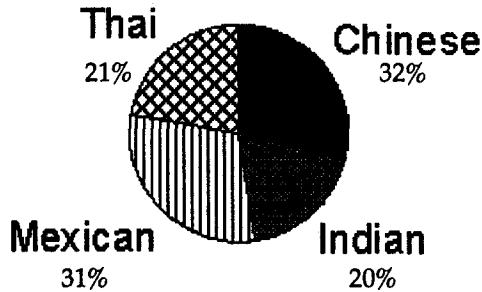
A)



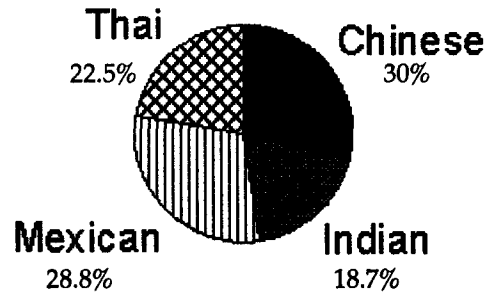
B)



C)



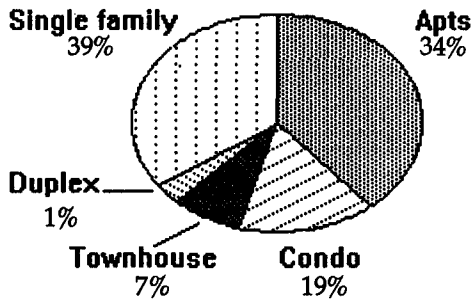
D)



Use the circle graph to solve the problem.

11) The circle graph shows the percent of the total population of 42,500 of Springfield living in the given types of housing. Round your result to the nearest whole number.

11) B



Find the number of people who live in single family houses.

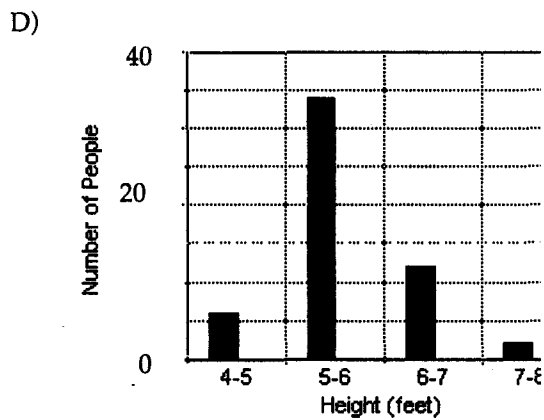
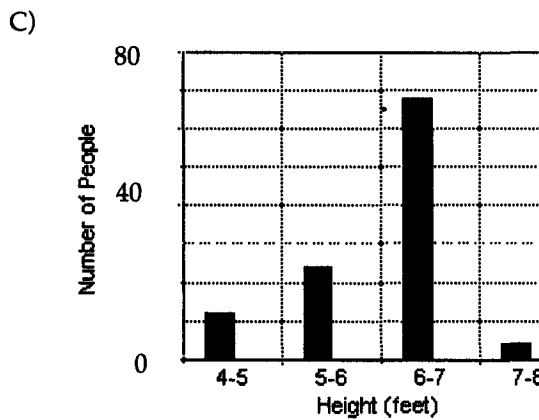
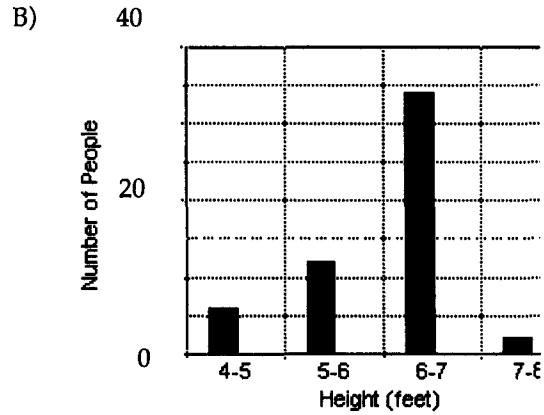
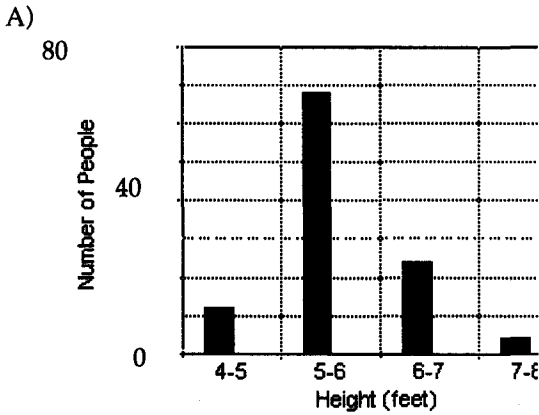
- A) 14,450 people B) 16,575 people C) 25,925 people D) 39 people

Select the bar chart that best represents the given frequency distribution.

12) The frequency distribution indicates the height in feet of persons in a group of 54 people.

12) D

Height (feet)	Number of persons
4-5	6
5-6	34
6-7	12
7-8	2



Construct a stem-and-leaf display for the given data table.

13)

10 32 63 16 63 23
44 21 34 22 49 10
55 40 52 31 55 13

13) A

A) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 3\ 1\ 2 \\ 3 & 2\ 4\ 1 \\ 4 & 4\ 9\ 0 \\ 5 & 5\ 2\ 5 \\ 6 & 3\ 3 \end{array}$

B) $\begin{array}{l|l} 1 & 0\ 4\ 0\ 3 \\ 2 & 3\ 1\ 2 \\ 3 & 4\ 6\ 1 \\ 4 & 4\ 9\ 0 \\ 5 & 5\ 9\ 5 \\ 6 & 3\ 3\ 8 \end{array}$

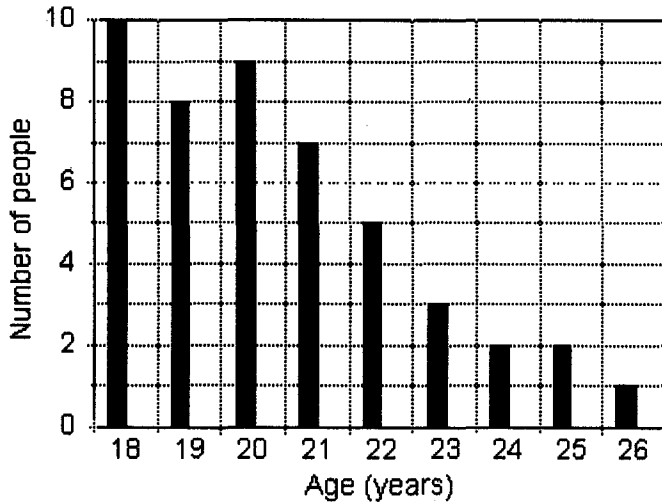
C) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 3\ 1\ 2 \\ 3 & 2\ 4\ 1\ 5 \\ 4 & 4\ 9\ 0 \\ 5 & 5\ 2\ 5 \\ 6 & 3\ 3\ 2 \end{array}$

D) $\begin{array}{l|l} 1 & 0\ 6\ 0\ 3 \\ 2 & 3\ 1\ 2 \\ 3 & 2\ 4\ 0\ 3 \\ 4 & 4\ 9\ 0 \\ 5 & 5\ 2\ 5\ 1 \\ 6 & 3\ 3 \end{array}$

Answer each question appropriately based on the corresponding bar chart.

14)

14) B



How many people were surveyed?

- A) 45 B) 47 C) 10 D) 58

Find the area under the normal curve for the condition.

15) Find the area between $z = 0.54$ and $z = 1.91$.

15) B

- A) 26.6% B) 26.7% C) 23.3% D) 26.3%

16) Find the area between $z = -2.49$ and $z = 1.19$.

16) B

- A) 86.8% B) 87.7% C) 11.3% D) 11.1%

17) Find the percent of the area between the mean and 1.64 deviations from the mean.

17) A

- A) 0.449 B) 0.453 C) 0.950 D) 0.551

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 percentage of bulbs that can be expected to last the period of time.

18) Less than 500 hours

18) D

- A) 60% B) 20% C) 48% D) 50%

19) Between 500 hours and 675 hours

19) D

- A) 94% B) 45.12% C) 96% D) 46%

20) Between 290 hours and 500 hours

20) A

- A) 48.2% B) 58.22% C) 48.26% D) 58.26%