Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

Solve the following problem involving probability.

1. In rolling a pair of dice. What is the probability of getting a sum of 5?

In a 52 deck of Cards

2. What is the probability of drawing an even number less than 5?

3. What is the probability of getting an Ace and a flower?

4. What is the probability of getting a king or a diamond?

5. In how many ways can 10 people sit in a round table?

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

6. There are 5 males and 4 females. How many 5-member committees can be formed if a committee is composed of 3 males and 2 females?

7. How many diagonals does a regular heptagon have?

The table below shows the attitude of people about a certain government issue.

Gender/ Attitude	Agree	Disagree	Totals
Female	30	70	100
Male	45	55	100
Totals	75	125	200

8. What is the probability of getting a male and agrees in the issue?

9. What is the probability of a female or Disagree in the issue?

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

Solve the following problem involving data analysis.

The following data are results of the physics exam of 10 students.

52, 63, 70, 51, 40, 31, 20, 18, 22, 18

10. Find the mean.

11. Find the median.

12. Find the Mode.

13. Find Quartile 1

14. Find Quartile 3

15. Draw a Box and Whisker plots.

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

The following data are the number of costumer of a computer cafe in a week, 24, 30, 15, 10, 16, 23 and 22.

16. Find the Range.

17. Calculate the intervals.

18. What is the Class size?

19. Construct a Frequency Distribution Table.

20. Construct a Frequency histogram.

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

ANSWER

Solve the following problem involving probability.

1. In rolling a pair of dice. What is the probability of getting a sum of 5?

n(S) = 36, n(E) = 4, P(E) = 4/36

In a 52 deck of Card,

2. What is the probability of drawing an even number less than 5?

P(E) =8/ 52 or 2/13

3. What is the probability of getting an Ace and a flower?

$P(E_1 \cap E_2)$= 1/52

4. What is the probability of getting a king or a diamond?

$P(E_1 \cup E_2)$ = 13/52 + 4/52-1/52 = 16/52 or 4/ 13

5. In how many ways can 10 people sit in a round table?

P = (n-1)! = 9! =362880

6. There are 5 males and 4 females. How many 5-member committees can be formed if a committee is composed of 3 males and 2 females?
$({}_5C_3)({}_4C_2)$ =10 X 6 = 60

7. How many diagonals does a regular heptagon have?
Solution:
Heptagons have 7 points and a diagonal is composed of 2 points. Then n = 7, r = 2.

$$ {}_7C_2 = \frac{7!}{(7-2)!\,2!} = 21 $$

The table below shows the attitude of people about a certain government issue.

Gender/ Attitude	Agree	Disagree	Totals
Female	30	70	100
Male	45	55	100
Totals	75	125	200

8. What is the probability of getting a male and agrees in the issue?
$P(E_1 \cap E_2)$= 45/200 or 9/40
9. What is the probability of a female or Disagree in the issue?
$P(E_1 \cup E_2)$ = 100/200 + 125/200-70/200 = 155/200 or 31/40

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

Solve the following problem involving data analysis.

The following data are results of the physics exam of 10 students.

52, 63, 70, 51, 40, 31, 20, 18, 22, 18

10. Find the mean.

Solution:

$\bar{x} = \frac{52+63+70+51+40+31+20+18+22+18}{10}$=38.5

11. Find the median.

Solution:

18, 18, 20, 22, 31, 40, 51, 52, 63, 70

Median = (31 + 40)/2 =35.5

12. Find the Mode.

Solution:

18, 18, 20, 22, 31, 40, 51, 52, 63, 70

Mode = 18

Using the same data construct a Box -and- Whisker plots.

The following data are results of the physics exam of 10 students.

52, 63, 70, 51, 40, 31, 20, 18, 22, 18

13. Find Quartile 1

Solution:

N/ 4 = 10/ 4 = 2.5 or 3

18, 18, **20**, 22, 31, 40, 51, 52, 63, 70

14. Find Quartile 3

Solution:

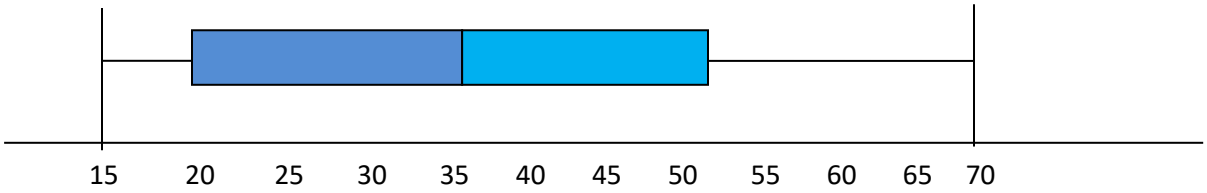
3N/ 4 = 3(10)/4 = 7.5 or 8

18, 18, 20, 22, 31, 40, 51, **52**, 63, 70

Name: _____ Period: _____ Date: _____

Unit 12- Data Analysis and Probability Test

15. Draw a Box and Whisker plots.



The following data are the number of costumer of a computer cafe in a week, 24, 30, 15, 10, 16, 23 and 22.

16. Find the Range.

R = 30 - 10 = 20

17. Calculate the intervals.

1 + 3.3 log (7) =3.8 or 4

18. What is the Class size?

i = 20/4 = 5

19. Construct a Frequency Distribution Table.

Classes	Frequency
10-14	1
15-19	2
20-24	3
25-29	0
30-34	1

20. Construct a Frequency histogram.