Grade 8 MATH UNIT 7 NOTES Name:_____

LINEAR EQUATIONS and their GRAPHS Class:_____

UNIT 7 : GRAPHS and Misinterpretations

Bar graph : bars
- width of bars must be the same
- height of bars will vary
- specific qualities of objects – larger values

Circle Graph:
- percentages of objects given

Double Bar Graph:
- two sets of data on same bar graph

Line graph:
- changes over time

Pictograph :
- images represent numbers of objects
- low numbers of objects

Which is the best graph to use?

1. Eugene recorded the colour of every hat that entered your homeroom today. What is the best graph he should use to display his data?_____
2. To represent the percentage of favourite beverage for our Grade 8 Class, which graph would best represent the data?_____
3. Which graph best shows the change in height of a person from birth to age 15?

   _____

4. Which graph best shows the recycling bottle totals for both boys and girls from grades 6 to 9?_____

5. **Which graph goes with which data?**

A) _____ Two sets of data on one graph

B) _____ percentages

C) _____ low number of items

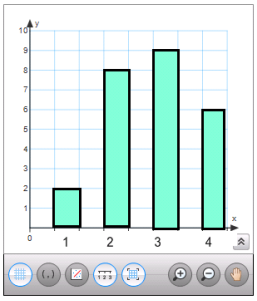
D) _____ Specific items larger quantities

E) _____ changes over time

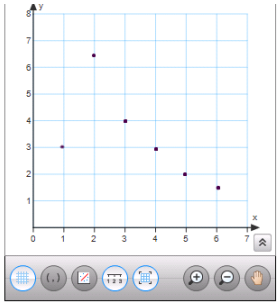
Identify diagram of the best graph to used?

6. To show the variation in depth of water in a pond over a period of time, what is the most suitable graph?

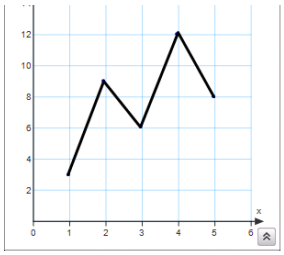
A)



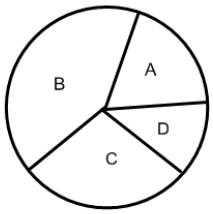
B)



C)

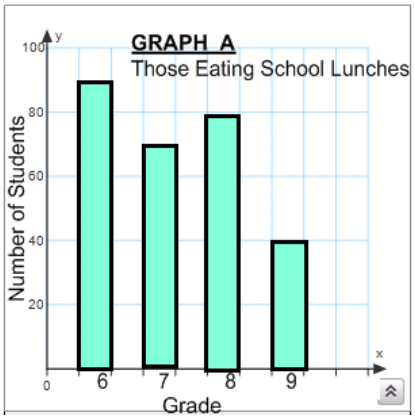


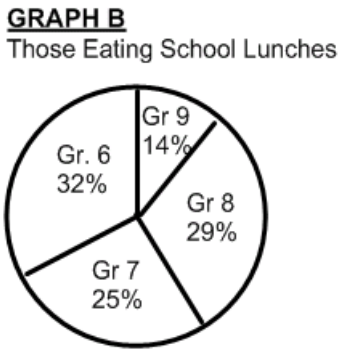
D)

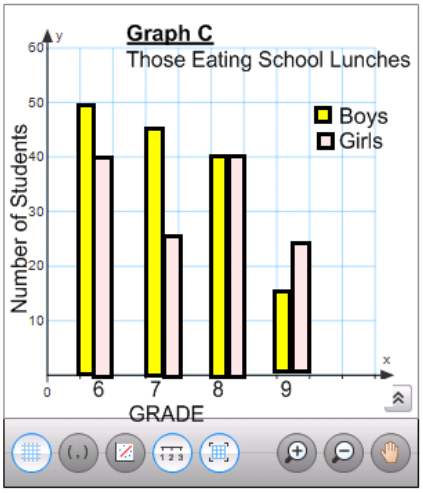


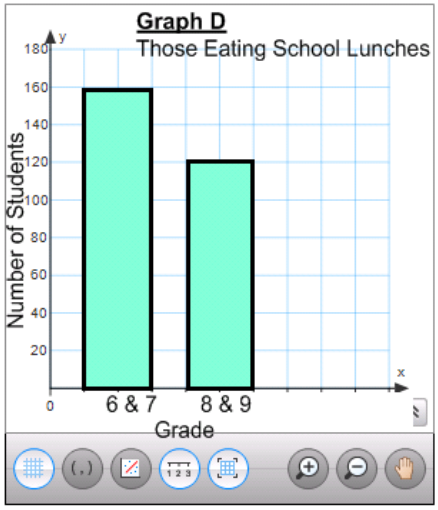
INSTRUCTIONS: Use the following graphs for SELECTED RESPONSES # 6 - 8

All Graphs display the same data.









7. Which graph best shows the number of Grade 8s who eat school lunches?

   _____

8. For finding the total number of boys eating school lunches, which graph is best?

   _____

9. Which graph best shows the percentage of students eating school lunches?

   _____

Graph MISINTERPRETATIONS:

- On your graph, axis scale does not start at ZERO
- Scale of axis too small
- Sector of circle graph pulled away from the others
- Bar width vary in bar graph/double bar graph
- Size of items not the same in pictograph

10. For this graph, what is misleading?

A) A sector is separated from circle.
B) The key is not given.
C) The scale on the axis does not start at zero.
D) Size of the images are not the same.

CAMP ILUVDAWOODS

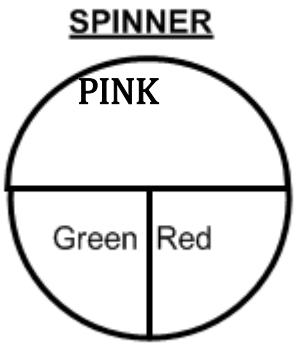
KEY ☺ = 3

SITE	STUDENT PREFERENCE
1	☺☺☺☺
2	☺☺☺☺☺☺
3	☺☺☺☺☺☺☺☺
4	☺☺☺☺☺

Theoretical Probability What you expect to happen in an experiment	Experimental Probability What ACTUALLY happens In an experiment
$P(A) = \frac{possible\ outcomes\ of\ Event\ A}{TOTAL\ number\ of\ possibilities}$	**Theoretically,** **In coins** **P(H) =_____** **P(T)=_____** **In two coins** **P(HH)=_____** **P(TT)=_____** **P(TH)= _____** **IN bag with 4 red 5 blue and 1 yellow:** **P(R)=_____** **P (B)=___** **P(W)=___**

P(A and B) = P(A) x P(B)	**11. IN bag with 4 red 5 blue and 1 yellow:** **P(R and W)=P(R) x P(W)** **= ____ x ____** **= _____**
P(A or B) = P(A) + P(B)	**12. IN bag with 4 red 5 blue and 1 yellow:** **P(R or W)=P(R) + P(W)** **= ____ + ____** **= _____**
P(not A) = 1 – P(A)	**13. IN bag with 4 red 5 blue and 1 yellow:** **P(Not red) = 1 – P(R)** **=** **=**
P(6 and H) =P(6) x P(H) =____ x _____ = _____	**14. P(7 and T) = P(7) x P(T)** **= ____ x ____** **= _____**

15. Given this spinner, what is the probability of getting pink?



16. When using a standard dice and a coin, what is the same probability of getting heads and a prime? ANSWER:_____

A) P(T and 4)
B) P(H and even)
C) P(T and < 2)
D) P(T and > 4)

17. Given a bowl of marbles with 2 purple, 7 red, 8 yellow, 1 white and 2 black, what is P(Y or P or Blue)?

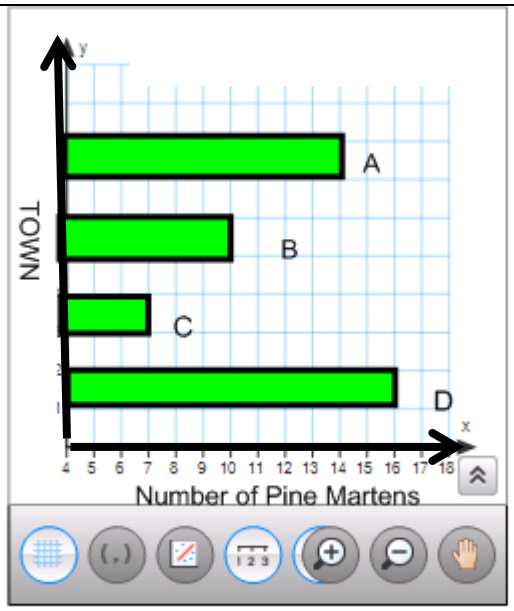
18. When tossing one coin three times, what is the probability of getting all tails?

19. Mrs. Hyde decided to toss a coin 10 times and got 6 heads. She was bored so she flipped the coin 90 times. Based on only the results of his first experiment, how many tails should she get?

20. When flipping a coin, which is FALSE? ANSWER:_____

A) Theoretically, you should get 5 heads and 5 tails when tossing it 10 times.
B) Experimental probability does not always equal theoretical probability.
C) The probability of getting heads or tails is a certain event.
D) When you flip the coin 20 times, you always get 10 heads and 10 tails.

MISINTERPRETATIONS



21. Using the graph given,

A) which town <u>appears</u> to have twice the population of Town C?

_____

B) which town <u>actually</u> has twice the population of town C?

_____

C) explain why this graph is misleading?

_____