Domain Quiz **Probability, Statistics, and Data Analysis** Name:

_____ 1. A class has too many students in it. There are 12 male students and 16 female students in the class. A person at random is selected to change to another classroom. What is the probability that the person moving to another class was a female student?

NUMBER OF FEMALE STUDENTS / TOTAL NUMBER OF STUDENTS : $\frac{16}{28} = \frac{4}{7}$

A. $\frac{3}{4}$ B. $\frac{4}{3}$ C. $\frac{3}{7}$ **D. $\frac{4}{7}$**

_____ 2. A small bag of Skittles contains 6 red, 7 purple, 8 yellow, and 4 orange. What is the probability that the first skittle a person eats out of this bag is a yellow skittle?

NUMBER OF YELLOW SKITTLES / TOTAL NUMBER OF SKITTLES : $\frac{8}{25} = \frac{32}{100} = .32 = 32\%$

A. 16 % B. 24% C. 28% **D. 32%**

_____ 3. A bag contains 10 marbles that are either blue or red. If the chances of picking a blue marble out of the bag are $\frac{7}{10}$, then how many red marbles must there be in the bag?

BLUE / TOTAL : $\frac{7}{10}$ WHICH LEAVES 3 MARBLES TO BE RED.

A. 1 **B. 3** C. 7 D. 10

_____ 4. A person creates an ice cream Sunday using either vanilla or chocolate ice cream, pecans or walnuts, and either chocolate, strawberry, or caramel syrup. If only one of each type is used in creating the ice cream Sunday, what is the probability that someone creates a Sunday using chocolate ice cream, walnuts, and chocolate syrup?

$\frac{2}{\text{ICE CREAM TYPES}} \cdot \frac{2}{\text{NUT TYPES}} \cdot \frac{3}{\text{SYRUP TYPES}} = 12$

A. $\frac{1}{12}$ B. $\frac{1}{7}$ C. $\frac{3}{7}$ D. $\frac{1}{4}$

_____ 5. Jim is taking a survey of the class. He found that 30% of the class are 16 years old, 55% of the class is 17 years old, and 15% of the class is 18 years old or older. Which type of graph would best represent Jim's Data?

A. Bar Graph **B. Circle Graph** C. Line Graph D. Pictograph

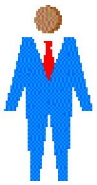
DECOMPOSITION OF 100%

_____ 6. A car company is comparing the horsepower of its sports car with the sports cars of 3 other companies. Which Graph would be appropriate to show the comparison between the 4 cars?

A. Bar Graph B. Circle Graph C. Line Graph D. Pictograph

COMPARISON

Transportation Type	Number of people using transportation
Airplane	140
Train	45
Bus	180
Automobile/Motorcycle	310



_____ 7. Given the values above for the total number of people using different types of transportation over the holidays in a small town, how many people could be **best** represented by this symbol?

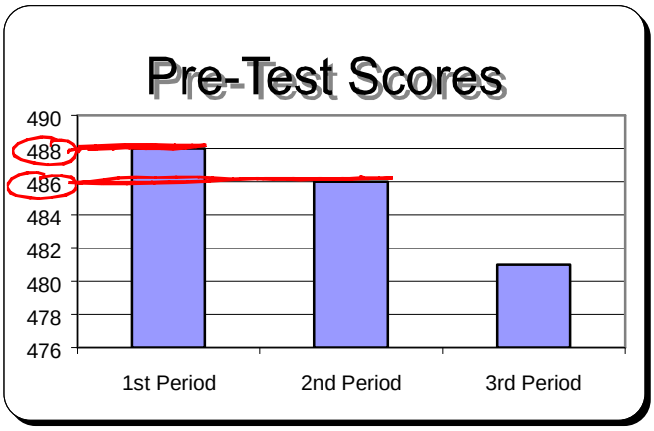
A. 1 B. 10 C. 50 D. 150

_____ 8. A company wishes to show their profits over the last 10 years and wants to plot the data on a chart. Which graph would be most appropriate?

A. Bar Graph B. Circle Graph C. Line Graph D. Pictograph

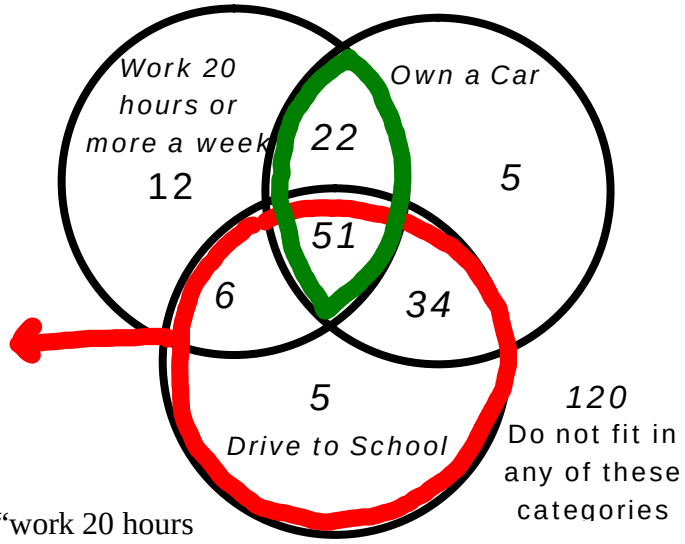
OVER TIME

_____ 9. The distribution of pre-test scores in Mr. Winking's GHSGT classes is shown on the graph. First period scored how many points higher on the test than 2nd period?



A. 1 B. 2
C. 5 D. 7

_____ 10. The following Venn diagram shows a breakdown of some juniors in high school. How many students Drive to School?



A. 5 B. 34
C. 6 D. 96

= 51 + 6 + 34 + 5
= 96

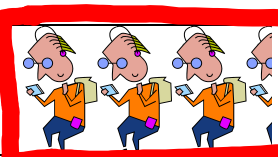
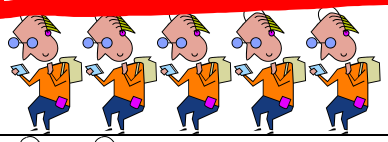
_____ 11. How many students "own a car" and "work 20 hours or more a week"?

A. 5 B. 12 C. 22 D. 73

= 22 + 51 = 73

_____ 12. The graph below shows the number of students that work part time for different lengths of time.

15 + 15 + 15 + 5 = 50

Number of students working part-time	
Work 0 – 10 hours per week part-time	
Work 11 – 20 hours per week part-time	
Work 21 –30 hours per week part-time	
Work 31 – 40 hours per week part-time	

 ***= 15 students***

How many students would you estimate work 0 – 10 hours per week?

A. 15 B. 45 C. 50 D. 60

A class has 8 people in it their ages are 15, 15, 18, 17, 19, 18, 16, 18

_____ 13. What is the average age of the 8 students? $\frac{(15+15+18+17+19+18+16+18)}{8} = 17$

A. 15 B. 16 C. 17 D. 18

_____ 14. What is the median age of the 8 students? 15, 15, 16, 17, 18, 18, 18, 19 → 17.5

A. 16 B. 16.5 C. 17 D. 17.5

_____ 15. What is the mode of the ages? (OCCURS THE MOST 18)

A. 15 B. 16 C. 17 D. 18

_____ 16. What is the range of the ages? (HIGH − LOW = 19 − 15 = 4)

A. 4 B. 10 C. 17 D. 34

_____ 17. Four friends have an average of 20 dollars each. Three of them have a total of $50. How much money must the last friend have?

A. 10 B. 20 C. 30 D. Not Enough Information

$\frac{50 + x}{4} = 20 \cdot 4$

$50 + x = 80$

$-50 \quad -50$

$x = 30$