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FIRST QUARTER EXAMINATION IN MATHEMATICS GRADE 7- MATHEMATICS

Name: _____ Grade & Section: _____ Date: _____

Multiple Choice Test 1

Direction: Read each statement carefully. Write the letter of your answer on the blank space provided before each number.

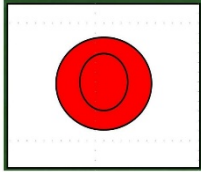
- _____ 1. This is a collection of well-defined objects.
A. Functions B. Relations C. Sets D. Binary Operations
- _____ 2. The objects in the set are also called _____.
A. Elements B. Sample C. Character D. Input
- _____ 3. This is a set with no elements.
A. Singleton Set B. Null Set C. Subset D. No set
- _____ 4. A set with only one member.
A. Null Set B. Subset C. Disjoint Sets D. Singleton set
- _____ 5. This refers to the number of elements of a set.
A. Number B. Width C. Cardinality D. Value
- _____ 6. Two sets are _____ if they contain exactly the same elements.
A. Equal B. Equivalent C. Subset D. Proper Subset
- _____ 7. A set A is called a _____ of B if every element of A is also an element of B.
A. Proper Subset B. Power Set C. Subset D. Disjoint
- _____ 8. Two sets are _____ if they have no element in common.
A. Power Set B. Equal C. Subsets D. Disjoint
- _____ 9. Two sets are _____ if they contain the same number of elements.
A. Disjoint B. Subset C. Equal D. Equivalent
- _____ 10. Which method is illustrated by { 1, 3, 5, 7, 9 }?
A. Roster Method B. Set-builder Notation C. Rule Method D. Binary Operations

Multiple Choice Test 2

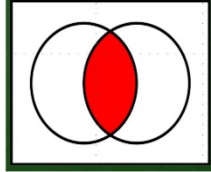
Direction: Read each statement carefully. Write the letter of your answer on the blank space provided before each number.

- _____ 11. $A \cap C$ can be read as
A. Intersection of A and C B. Complement of A and C C. Union of A and C D. Relation of A
- _____ 12. Based on the colored (red) part, which Venn diagram does NOT illustrate the union of two sets?

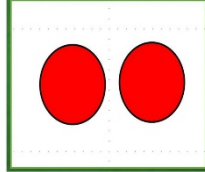
A.



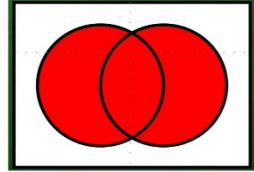
B.



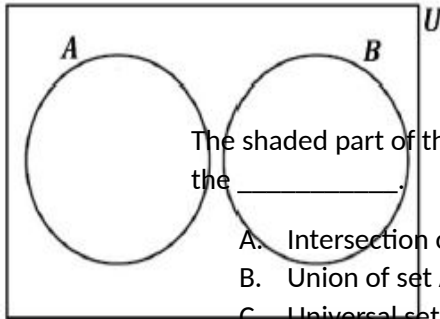
C.



D.



13.

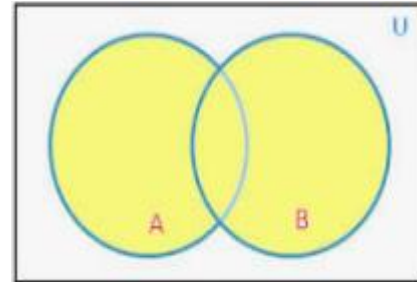


The shaded part of this image shows the _____.

- A. Intersection of set A and set B
- B. Union of set A and set B
- C. Universal set
- D. Neither set A nor set B

Which of the following statements are true for the Venn diagram shown?

- A. $A \cap B = \emptyset$
- B. $A \cup B = \emptyset$
- C. $A \cup B = A$
- D. $A \cap B = A$

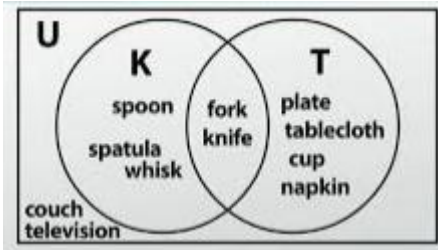


14.

15. Left Pocket (L) = {pencils, erasers, pens} while Right Pocket (R) = {gloves, paper, coins, phone}
What is $L \cup R$?

- A. $\emptyset$
- B. {gloves, paper, coins, phone}
- C. {pencils, erasers, pens}
- D. {pencils, erasers, pens, gloves, paper, coins, phone}

16.



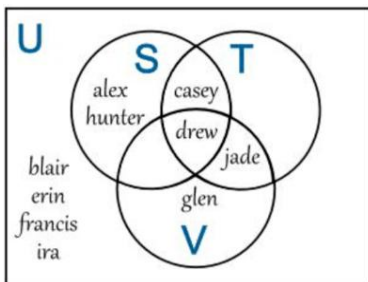
The members of Set $K \cap T$ are _____.

- A. {spoon, spatula, whisk}
- B. {couch, television}
- C. {plate, tablecloth, cup, napkin}
- D. {fork, knife}

17. Let $C = \{2, 5, 7, 10\}$ and $B = \{2, 4, 6, 8\}$.
Find $C \cup B$.

- A. {2,4,6,8,10}
- B. {2,4,5,6,7,8,10}
- C. {2, 4, 5, 6, 7, 8, 10}
- D. $\emptyset$

18. From the Venn diagram below, what is the set $S \cap T \cap V$?



- A. {casey, drew, jade, glen}
- B. {alex, casey, drew, hunter}
- C. {casey, drew}
- D. {drew}

19. If $A = \{1, 2, 3, 4, 5, 6\}$, $B = \{1, 2, 3, 5, 7, 9\}$ and $C = \{3, 5, 6, 7, 8\}$,

what is $(A \cup B) \cap (B \cup C)$?

- A. {1, 2, 3, 4, 5, 6, 7, 9}
- B. {1, 2, 3, 4, 5, 6, 7, 8, 9}
- C. {1, 2, 3, 5, 6, 7, 9}
- D. { }

20. Let $C = \{2, 5, 7, 10\}$ and $B = \{x | x \text{ is an odd whole number less than } 10\}$. Find $C \cup B$.

- A. {1,2,3,5,7,9,10}

- B. {2,4,5,6,7,8,10}
- C. {2, 4, 5, 6, 7, 8, 10}
- D. {1, 2, 4, 5, 6}

Multiple Choice Test 3

Direction: Read each statement carefully. Write the letter of your answer on the blank space provided before each number.

- ____21. When solving problems involving sets, the following are necessary, EXCEPT?
- A. Application of the knowledge in sets.
 - B. Defining and studying polygons such as triangles and quadrilaterals.
 - C. The use of Venn diagram and sets operations.
 - D. Both a and c
- ____22. Which of the following statements is NOT true about Venn diagram?
- A. Intersecting sets showing information and relationship between different categories in a word problem.
 - B. It is a principal way of showing sets diagrammatically.
 - C. It can't be used to solve word problems involving union and intersection of sets.
 - D. None of the above

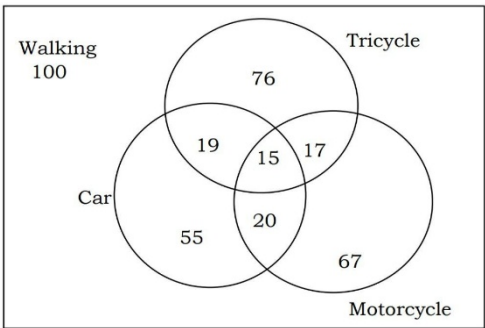
For items 23- 25. Refer to the problem below.

In a group of students, 30 played chess, 19 played volleyball, 25 played basketball, 14 played both volleyball and chess, 8 played both basketball and volleyball, 15 played both basketball and chess and 5 played both three events.

- ____23. How many played chess only?
- A. 30 B. 6 C. 59 D. 12
- ____24. How many played volleyball only?
- A. 2 B. 19 C. 41 D. 34
- ____25. How many students are there in all?
- A. 116 B. 74 C. 58 D. 42

For items 26 – 28.

The diagram below shows how the 369 students of PUP-Taguig Branch go to school.



- ____26. How many students ride both in a car and a tricycle?
- A. 4 B. 34 C. 54 D. 64
- ____27. How many students ride both in a car and the motorcycle?
- A. 5 B. 25 C. 35 D. 45
- ____28. How many students ride both in a tricycle and the motorcycle?

- A. 32 B. 42 C. 52 D. 22

____29. In a school, there are 30 teachers who teach Mathematics or Physics. Of these, 18 teach Mathematics and 6 teach both Physics and Mathematics. How many teach Physics only?

- A. 12 B. 18 C. 26 D. 30

____30. In a survey of 80 people, it was found that 35 people read newspaper H, 20 read newspaper T, 15 read the newspaper I, 5 read both H and I, 10 read both H and T, 7 read both T and I, 4 read all three newspapers. Find the number of people who read at least one of the newspapers?

- A. 35 B. 15 C. 20 D. 52

Multiple Choice Test 4

Direction: Read each statement carefully. Write the letter of your answer on the blank space provided before each number.

____31. It is the process of finding the sum of two or more integers where the value might increase or decrease depending on the integer being positive or negative.

- A. Subtracting integers B. Multiplying integers C. Adding integers D. Dividing integers

____32. _____ is a similar process of repetitive addition where an integer is added a specific number of times.

- A. Subtracting integers B. Multiplying integers C. Adding integers D. Dividing integers

____33. The following are the major properties of integers EXCEPT one:

- A. Integer Property B. Associative Property C. Commutative Property D. Distributive Property

____34. Integers are numbers that can be positive, negative or zero, but cannot be a _____.

- A. Rational number B. arithmetic operations C. Fraction D. absolute value

____35. Arrange the following integers from least to greatest: -5, -17, 3, 0

- A. 3, 0, -5, -17 B. 3, 0, -17, -5 C. -17, -5, 0, 3 D. -5, -17, 0, 3

____36. Arrange the following integers from greatest to least: -12, 15, -1, 3

- A. 15, 3, -1, -12 B. 15, 3, -12, -1 C. -1, -12, 3, 15 D. -12, -1, 3, 15

____37. Which of the following is the greatest integer?

- A. -33 B. -31 C. -28 D. -12

____38. Which operation would you do first? $(12 + 10) \div 10 \times 14 - 6$

- A. Division B. Multiplication C. Addition D. Subtraction

____39. Which one of the following expressions has the greatest value?

- A. $(2 - 8) \bullet (-4) - 6$ B. $(2 - 8) \bullet (-4 - 6)$ C. $2 - (8 \bullet -4 - 6)$ D. $2 - 8 \bullet (-4) - 6$

____40. What is the value of $-5 \bullet (-6 + -9)$ when reduced to simplest form?

- A. -75 B. -39 C. 39 D. 75

Multiple Choice Test 5

Direction: Read each statement carefully. Write the letter of your answer on the blank space provided before each number.

____41. Add: $-24 + (-5)$

- A. 19 B. -29 C. 29 D. -19

_____ 42. Subtract: $16 - (-4)$

- A. -12 B. 12 C. 20 D. -20

_____ 43. Divide: $-85 \div -5$

- A. -17 B. 17 C. -15 D. 13

_____ 44. The numeric value of the expression $-2 \bullet (6 - 7) - 5$ is _____.

- A. 8 B. 3 C. -3 D. -8

_____ 45. When dividing integers, a negative number divided by a positive number equals a ____ number.

- A. Negative B. Positive C. Rational D. Irrational

_____ 46. Which operation would you do first in the following equation? $10 - 4 \div 1 \times 5$

- A. Division B. Subtraction C. Addition D. Multiplication

_____ 47. In the Sahara Desert one day it was 136°F . In the Gobi Desert a temperature of -50°F was recorded. What is the difference between these two temperatures?

- A. 86°F B. 186°F C. -86°F D. -186°F

_____ 48. In Buffalo, New York, the temperature was -14°F in the morning. If the temperature dropped 7°F , what is the temperature now?

- A. 7°F B. 21°F C. -21°F D. -7°F

_____ 49. Mt. Everest, the highest elevation in Asia, is 29,028 feet above sea level. The Dead Sea, the lowest elevation, is 1,312 feet BELOW sea level (HINT: that's -1,312). What is the difference between these two elevations?

- A. 30,340 feet B. 27,716 feet C. -27,716 feet D. -30,340 feet

_____ 50. A scuba diver is swimming at a depth of -12 feet. She dives down to five times the depth. What is her depth now?

- A. -7 feet B. 60 feet C. 7 feet D. -60 feet