Operations on Numbers - Worksheet

Lesson: Arithmetic

1) Chris bought fourteen apples from the street worth ten pesos each. He later sold everything to a supermarket for seventeen pesos and fifty centavos. How much did Chris profit?

A. 60
B. 85
C. 105
D. None of the above

2) 0.934 is greater than ⅔ by how much?

A. 0.26733...
B. 0.25733...
C. 0.26788...
D. 0.25788...

3) BTS has started an indiegogo campaign for their new album. The three packages include yellow, at 10 USD, blue, at 20 USD, and red, at 30 USD. If twenty people purchased the yellow package, ten people purchased the blue package, and five people purchased the red package, how much is the total revenue of the indiegogo campaign?

A. 350
B. 400
C. 450
D. 550

4) Danny earns a thousand pesos for allowing his neighbor to put an advertisement in his front yard. As a Christian, he donates ten percent of his earnings to the Church. A third of the remainder of the money is budgeted for his date with Brenda. With what he is left with, he gives everything to his parents and one sibling, which they then split equally. How much does his sibling receive?

A. 300
B. 200
C. 190
D. 233

5) A recent survey asks 175 respondents for their preference among the games Snakes and Ladders, Tic Tac Toe, and Rock Paper Scissors. 25 respondents prefer Snakes and Ladders, while double that amount prefer Rock Paper Scissors. Assuming each person has exactly one preference, what is the ratio of (people who prefer Tic Tac Toe) : (people who prefer Rock Paper Scissors)?

A. 4:3
B. 3:4
C. 2:1
D. 1:3

6. Marco holds a race in a circular track of length 600m between his two buddies, Frank and Henry. Marco can run at the speed of 6m/s, Frank at 8m/s, and Henry at 10m/s. However, Henry will only start running once Marco and Frank coincide once again at the starting mark. Assuming they run in the same direction, from the time Marco and Frank start running, after how many seconds will they all meet again at the starting mark?

A. 300s
B. 600s
C. 750s
D. 1200s

7. What should be added to 235 for the sum to be 0?

A. -235
B. 0
C. 15.32
D. 235

8. It takes Jeremy fourteen days to clean his room. With the help of a vacuum cleaner, he is able to clean his room in ten days. However, the vacuum cleaner costs 2,000 pesos to purchase. If he is able to earn five hundred pesos an hour at work, in how many hours will he be able to purchase a vacuum cleaner and clean his room?

A. 240
B. 244
C. 336
D. 340

9. *Determine the value of* $(7 + 3 * 3) - [-(2^3 - 4^2)/2]/2$

A. 7
B. 10
C. 14
D. 18

10. *Determine the value of* $4 + (6 * (2 - 1)) / 3$

A. 4
B. 6
C. 8.33...
D. 10

11. If $a \,\%\, b = a^b - b^a$, what is $(2 \,\%\, 3) \,\%\, (3 \,\%\, 2)$?

A. -2
B. 0

C. 2

D. 20

12. Determine the value of $\frac{2}{7+\frac{5}{6}}$

A. 4

B. 12/47

C. 47/12

D. None of the above

13. Sally bought seven apples from the store. On the way home, the witch said she will double the number of her remaining apples if she gives the witch four apples. If Sally accepts the Witch's offer, how many apples will she have left?

A. 1

B. 6

C. 7

D. 14

14. If a > b, under which of the following conditions will a/b < 0?

A. Both Positive

B. Both Negative

C. A = 0

D. None of the above.

15. The tooth queen told Danny about a secret formula tooth fairies use to determine the amount of money one will receive. Particularly, molars, premolars, canines, and incisors are normally worth 20, 10, 5, and 2 pesos each respectively. However, for every incisor present under the pillow, the value of each incisor will double (2 incisors will quadruple the value). Similarly, each canine will triple the value of any canine. Finally, the total number of molars and premolars is divided equally between the two, the final counts being used to calculate the value. What is the expected amount if Danny has saved up 3 incisors, 4 molars, 2 premolars, and 2 canines?

A. 96 pesos

B. 106 pesos
C. 112 pesos
D. 228 pesos

16) During the Rio 2016 Olympics, Usain Bolt set the world record for being the fastest runner at 9.81m/s. However, it is rumored that for every year that passes by, he will only retain 90% of his previous speed. Assuming that the Rio Olympics was held on August 2016, what will be his speed in August 2018 if the rumor holds true? Estimate to the nearest whole value.

A. 6
B. 7
C. 8
D. 9

17) Barry can consume ten hot dogs per minute. If each hot dog were split into four, how many ½ hot dogs can Barry consume in an minute?

A. 5
B. 10
C. 20
D. 40

18) C is equal to A!B as 24 is equal to 7!14 +3. If A = 7 and C = 3 respectively, and ! is one of the four main operators, what number does B represent?

A. -4
B. -8
C. -2
D. 10

19) Selena bought 5 pens at 10 pesos each. If she sold all of them for a total of 70 pesos, what is Selena's return on investment (increase in value divided by original value) in percentage?

A. 40%
B. 60%
C. 66%
D. 80%

20) Henry Sy, the owner of SM, realized that he wanted to be more competitive against his competitors, Robinsons, in the Philippines. As of currently, there are 80 SM malls and 60 Robinsons malls. Assume that each SM mall contributes the same market share in pesos, and the same goes for each Robinsons mall. Right now, 60% of the market share belongs to Robinsons, while the remainder belongs to SM. Knowing that Robinsons will open 12 more malls in the near future, AT LEAST how many more malls must Henry Sy open in order to have majority (at least 50%) of the market share?

A. 32
B. 48
C. 64
D. 80

21. Which of the following best represents the associative property of addition?

a. $(6+0)-3=3-0$
b. $3+(bx+4)=(3+bx)+4$
c. $1001-99+365=365+1001-99$
d. $(4y+9)+(5y+8)=9y+17$

22. Which of the following show the additive inverse and multiplicative inverse of $\frac{1}{x^{-2}}$ respectively?

a. $\frac{1}{x^2}$ and x^{-2}
b. x^{-2} and $-\frac{1}{x^2}$

c. $-x^2$ and $-x^{-2}$
d. $-\frac{1}{x^{-2}}$ and $\frac{1}{x^2}$

23. Sherlock and his three friends are on a shopping spree after coming from a tiring expedition. However, the spellcaster inflicted them with a curse, with it only being lifted once the person has exhibited either additive or multiplicative inverse in some manner. This is what the magician will scrutinize.

Sherlock: The number of shirts in the cart as he places one in and takes it out.
Jones: The number of pairs of shoes he bought if he buys two and this purchase gets halved by a wizard.
Adam: The number of pizza slices he eats if he eats an eighth of an 8-slice pizza.
Peter: The price of a tuxedo he buys that was initially 50% off, then another 30% was shaved due to his contributions as a member of the SSS.

Which of the following friends should Sherlock warn about the curse?

A. He should warn himself.
B. Jones
C. Adam
D. Peter

24. Assuming each statement is true, which of the following does NOT exhibit the commutative property of equality?

A. Brushing one's teeth then eating breakfast is the same as eating breakfast then brushing one's teeth.
B. Throwing six sets of ten marshmallows in the milkshake is the same as gently placing ten sets of six marshmallows in the milkshake.
C. Using two controllers on a single Nintendo Switch to play Mario Kart is the same as using two Nintendo Switch consoles with local multiplayer to play Mario Kart.
D. Ten children sitting around in a circle is equivalent to ten children sitting in a round circle.

25. What property of equality does the statement below best exhibit?

A teacher giving five candies to each of four children and seven teenagers is equivalent to her giving 20 candies to children and 35 candies to teenagers.

A. Reflexive
B. Commutative
C. Distributive
D. Symmetric