

NUMBER CONCEPTS 2013 page 2

13. Bill was making \$7.50, got a raise and is now getting \$8.25. What percent increase did he receive?
A) 0.1% B) 1% C) 10% D) 1.1%
14. Linda is retiring and looking at her options. She has her choice of 4 different coffee stands to buy coffee, 3 different golf courses to golf, and 5 different places to have lunch. How many days can she buy coffee, golf and have lunch without repeating the same routine?
A) 12 days B) 17 days C) 50 days D) 60 days
15. There is a cooler with 10 regular sodas, 12 diet sodas, 16 bottles of water? If you pick a drink randomly from the cooler, what is the probability that it is a soda?
A) 5/19 B) 6/19 C) 8/19 D) 11/19
16. The ages of the participants in your MCTM test room are used to find the mean, median mode and range. If you want to also include your room monitor, who is your 56 year old math teacher, which statistic is likely to change the most?
A) mean B) median C) mode D) range
17. If your basketball team won 8 games out of 11 games played so far this season. They will play 19 regular season games. How many of their remaining games must they win to win at least 75% of their regular season games?
A) 6 B) 7 C) 8 D) 9
18. If the ratio of the angles of a triangle is 4:5:6, what is the measure of the smallest angle?
A) 12° B) 36° C) 48° D) 60°
19. Sherry is able to buy 5 snacks for \$3.85. At this same rate, how much should would 11 snacks cost?
A) \$8.47 B) \$7.85 C) \$7.75 D) \$7.68
20. What is the product of a number and twice its reciprocal?
A) n B) $2n$ C) $\frac{1}{2}$ D) 2
21. Which of the following is the largest number if $a = 0$ and $b = 1$
A) a^b B) b^a C) 2^a D) 2^b
22. $100 - 99 + 98 - 97 + 96 - 95 + \dots + 4 - 3 + 2 - 1 =$
A) 0 B) 50 C) 200 D) 1
23. Two rectangles are similar. If the ratio of their sides is 3:1, what is the ratio of their areas?
A) 9:1 B) 3:1 C) 6:1 D) 12:1
24. What is the mean of the first 49 positive integers?
A) 49 B) 34 C) 25 D) 24
25. The sum of 10 odd numbers is:
A) always even B) always odd C) zero D) cannot tell from this information

Number Concepts 2013 Answer Key

1. D
2. B
3. C
4. B
5. B
6. C
7. C
8. A
9. C
10. B
11. C
12. D
13. C
14. D
15. D
16. D
17. B
18. C
19. A
20. D
21. D
22. B
23. A
24. C
25. A