SAT Math – II

Time to complete all questions – 25 minutes

20 questions

Directions: For each of the questions given below, solve the problem and choose the best answer.

Notes:

1. You may use the calculator
2. All number are real numbers
3. Figures in this test are drawn accurately EXCEPT when stated in the question that figure is not drawn to scale
4. Unless otherwise specified, the domain of any function *f* is assumed to be the set of all real numbers x for which *f(x)* is a real number

1. The sides of a right triangle are 12 inches and 5 inches. What is the size of the hypotenuse?
   A. 13 inches
   B. 24 inches
   C. 12 inches
   D. 48 inches
   E. 28 inches

2. What is 1/5% of 100?
   A. 0.20
   B. 2
   C. 5
   D. 1
   E. 10

3. Jonathan offered Christie $60 to handle her paper route for a week while she is on vacation. Jonathan is keeping 10% of the week's pay for herself because she had to teach Christie the route, and thus giving Sylvia the rest.
   How much is Jonathan's weekly salary normally?
   A. $55.00
   B. $60.56
   C. $66.67
   D. $60.50
   E. $65.56

4. If $5x^{-2} = 1/5$, x =
   A. 5
   B. -2
   C. -1/2
   D. 1/4
   E. ½

5. Jackie drives 120 miles due west and then 50 miles due south at a rate of 130miles per hour to get from her house to her aunt's house.
   How much faster would it take her if she were able to drive in a straight line from her house to her aunt's house at the same rate of speed?
   A. 20 minutes
   B. 18 minutes
   C. 40 minutes
   D. 36 minutes
   E. 30 minutes

6. If $x^3 - 8 = 68$, then x equals:
   A. The third root of 60
   B. -4
   C. 4
   D. 64
   E. -64

7. If 25 percent of r is 15, then what is r percent of 100?
   A. 48
   B. 24
   C. 60
   D. 36
   E. 60

8. Two roommates leave their home and drive separately to the grocery store, which is located 32 miles away. Ben departs at 2:30 pm, and travels at an average speed of 40 mph. Smith leaves 2 minutes later, and arrives at the store three minutes before Ben.
   How fast, on average, was Smith driving?
   A. 41.67 mph
   B. 44.63 mph
   C. 45.87 mph
   D. 46.07mph
   E. 47.27 mph

9. What is the next number in the following series:
   14,003, 12,005, 10,007
   A. 9,008
   B. 9,007
   C. 10,007
   D. 8,009
   E. 10,008

10. Naomi has n cookies, Jill has twice as many cookies as Naomi, and John has one-third as many cookies as Jill.
    If Naomi has two dozen cookies, how many cookies do Jill and John have together?
    A. 32
    B. 8
    C. 15
    D. 44
    E. 28

11. Students of Saint Mary's school practice a musical instrument each week for the minutes listed below:
    90, 30, 50,30, 40, 90, 130, 20, 200, 80
    Calculate the median
    A. 65
    B. 66
    C. 67
    D. 68
    E. 69

12. Which number is next in the following sequence?
    0,1,1,2,3,5,8,13,21 ...
    A. 34
    B. 35
    C. 36
    D. 37
    E. 38

13. What fraction represents the probability of rolling two six-sided dice and getting a total of five?
    A. 1 / 21
    B. 1 / 20
    C. 1 / 8
    D. 1 / 6
    E. 1 / 36

14. A bag contains 70 balls, each of which has a unique number, ranging from 1 to 70, written on it. What is the probability of picking a ball that has at least one number 5 written on it?
    A. 2 / 15
    B. 1 / 12
    C. 1 / 6
    D. 4 / 15
    E. 1 / 4

15. Given the equation of the line 4x + 3y = 9, find where the line intersects the x-axis.
    A. (2, 0)
    B. (0, 3)
    C. (0, 2)
    D. (2.25, 0)
    E. (0, 4.5)

16. Alice purchased four birthday presents for her family members.
    The prices of the presents were $20, $7, $30, and $70. What is the median price?
    A. $60
    B. $5
    C. $25
    D. $20
    E. $15

17. Which of these numbers, when divided by 3, results in a number not divisible by 6?
    A. 6
    B. 18
    C. 36
    D. 54
    E. 72

18. The charge to use the internet at a coffee house is r dollars for the first 20 minutes and s dollars for each minute thereafter.
    What is the cost of using the internet, in dollars, where t > 20 minutes?
    A. 10r + st
    B. (10r + s)t
    C. r + s(t - 10)
    D. r + st
    E. 12r + s / t

19. q is divisible by 5, 3 and 7. Which of the following is NOT divisible by 7?
    A. q*q
    B. q + 2
    C. q x 7
    D. q x 5
    E. q/3

20. A pair of shoes cost $200. One week, they were on sale for 20% off. The next week, the sale price was increased by 20%.
    What is the final cost?
    A. $190
    B. $192
    C. $196
    D. $198
    E. $180

Answers:

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