1. A problem author for a math competition wrote 44 problems so far, but he needs a total of 50. How many more problems must he write?

(a) 5

(c) 6

(b) 7

(d) 8

2. If Jonathan is 23 years old and Sarina is 5 years older than him. Then what is the age of Sarina

(a) 58

(c) 68

(b) 28

(d) 88

3. Compute 1.123 + 1.01 + 0.1111.

(a) 2.2441

(c) 1.441

(b) 3.2441

(d) 4.441

4. If a bicycle costs $35.55 and Tom has $29.55, how many more dollars does he have to save in order to buy the bike?

(a) $3

(c) $5

(b) $4

(d) $6

5. Find the remainder when dividing 25 by 4

(a) 0

(c) 4

(b) 1

(d) 25

6. 39 fourth grader, 45 fifth grader and 34 sixth grader were in the school play. How many children were in the school play altogether?

(a) 128

(c) 130

(b) 132

(d) 118

7. Bishop has read 43 pages. The book has 197 pages. How many pages does Bishop still have to read to finish his book?

(a) 134
(c) 154
(b) 144
(d) 164

8. At a birthday party you counted 60 eyes. How many people were at the party?

(a) 30
(c) 56
(b) 25
(d) 34

9. My doctor told me that I am 5 feet and 10 inches tall. If there are 12 inches in a foot, how tall am I in inches?

(a) 30
(c) 60
(b) 40
(d) 70

10. What is the sum of the first six positive odd numbers?

(a) 49
(c) 91
(b) 64
(d) 36

11. My favorite number is 1337. There is one special number that I can multiply by 7 to obtain 1337. What is this number?

(a) 149
(c) 191
(b) 164
(d) 136

12. Lily stocked 8 library shelves with reference books. Each shelf held 14 reference books. How many reference books did lily place on the library shelves?

(a) 149
(c) 181
(b) 112
(d) 144

13. The entire fourth grade class is going to the zoo. There are 3 buses for the field trip. Each bus has the same amount of kids. If there are 90 kids in the fourth grade, how many are on each bus?

(a) 30

(c) 81

(b) 64

(d) 36

14. Compute 1.55 x 21.4.

(a) 22.17

(c) 12.17

(b) 33.17

(d) 15.17

15. Write the decimal form of the following 39/100

(a) 3.9

(c) 0.039

(b) 3.09

(d) 0.39

16. In a baseball game, Charlie hits three singles (1 base), one double (2 bases), one triple (3 bases), and one home run (4 bases). For this game, how many bases did Charlie average per hit?

(a) 2

(c) 3

(b) 1

(d) 0

17. Write the lowest form of the fraction 35/50

(a) 2/15

(c) 7/10

(b) 1 /10

(d) 7/15

18. Jack is taking a math competition in which he must solve 50 problems in 1.5 hours. He made the mistake of staying up last night playing computer games, and falls asleep for the first thirty minutes of the competition. If he wishes to receive a perfect score, how many seconds, on average, should he spend per problem after his nap?

(a) 41 seconds

(c) 72 seconds

(b) 64 second

(d) 52 seconds

19. Ralph Wiggum likes picking his nose. However, every time he does, the number of bacteria on his finger doubles. There are 3 bacteria on his finger right now. How many bacteria will be on his finger if he picks his nose seven times?

(a) 158

(c) 281

(b) 656

(d) 384

20. Calculate 125 x 125 x 8 x 8 x 8

(a) 6000000

(c) 7000000

(b) 8000000

(d) 9000000

21. Subtract the following

$$\begin{array}{r} 968 \\ -\ 392 \\ \hline \end{array}$$

(a) 576

(c) 876

(b) 146

(d) 236

22. The grocer bought canned goods for $1,765 and sold them for $2,680. How much profit did the grocer make?

(a) 515

(c) 315

(b) 715

(d) 915

23. Which of the following symbol makes the statement true?

$$\frac{3}{4} \text{ ——— } \frac{5}{6}$$

(a) <

(c) >

(b) =

(d) None of these

24. Maria reads an average of 5 books per month. What is the average number of books that Maria reads in one year?

(a) 90

(c) 15

(b) 14

(d) 60

25. A train traveled 130 miles in 2 hours. The same distance was traveled each hour. How far did the train each hour?

(a) 27 miles

(c) 72 miles

(b) 65 miles

(d) 56 miles

26. Beth made 100 book marks for charity. She sold all of them and raised $65. How much did Beth charge for each book mark?

(a) 0.15

(c) 0.14

(b) 0.64

(d) 0.65

27. What two-digit number evenly divides both 323 and 391?

(a) 15

(c) 16

(b) 17

(d) 33

28. A painter mixes 4 gallons of white paint with 1 gallon of red paint to make 5 gallons of her signature pink paint. Each gallon of white paint costs $2 and each gallon of red paint costs $3. How much money does the painter need to make 400 gallons of pink paint?

(a) $660

(c) $770

(b) $880

(d) $550

29. Melissa has 216 flowers. She wants to make vases with six flowers each to take to the retirement home. How many vases will Melissa need?

(a) 64

(c) 36

(b) 10

(d) 18

30. My computer is capable of only one process: When I enter a two-digit number, it reverses its digits, subtracts 7 from the result, and gives this final number as its answer. For example, if I enter 34, the computer first reverses its digits to obtain 43, and then subtracts 7 to give its final answer 36. When I put in another number, the computer gave me 22 as its final answer. What number did I enter? We work backwards. Since the computer's final answer was 22, it must have had 29 before subtracting

(a) 92 (c) 90

(b) 91 (d) 93

31. We have 5 numbers whose average is 11. Suppose we include 29 as a sixth number. What is the new average of these 6 numbers?

(a) 48 (c) 14

(b) 28 (d) 36

32. Define $n!$ as the product of the first $n$ counting numbers. Compute $11! \div 8!$

(a) 225 (c) 990

(b) 350 (d) 600

33. In how many ways can 5 books be arranged on the shelf?

(a) 110

(c) 120

(b) 130

(d) 150

34. Wagner has 288 bricks. He is building a new patio. How many rows of 9 bricks can he lay for the new patio?

(a) 36

(c) 30

(b) 32

(d) 37

35. In the game of *Mafball*, points can only be scored in 3 points or 5 points. What is the largest unattainable score in *Mafball*?

(a) 7

(c) 16

(b) 12

(d) 9

36. A fruit company orders 4800 pounds of oranges at $1.80 per pound. The shipping cost is $3000. Suppose 10% of the oranges are spoiled during the shipping and the remaining oranges are all sold. What should the selling price per pound be, given that the fruit company wants to make a net 8% profit?

(a) 2.81

(c) 4.91

(b) 3.51

(d) 2.91

37. What fraction of the letters in SINUSOIDAL are consonants?

(a) 1/8

(c) 1/2

(b) 1/6

(d) 1/5

38. If 28 people were on a bus initially, and at the Hackensack stop, 13 people came onto the bus and 17 people went off the bus, how many people are on the bus after the Hackensack stop?

(a) 21

(c) 31

(b) 24

(d) 49

39. Kevin Lee wants to be 7 inches taller than Yao Ming, who is 7 feet 5 inches tall. However, being 5 feet 6 inches, he needs to stand on a table to achieve this height. How high, in inches, does the table need to be? (12 inches equals 1 foot)

(a) 17

(c) 34

(b) 30

(d) 10

40. There are 4,064 calories in 8 pints of strawberry ice cream. How many calories are there in each pint of strawberry ice cream?

(a) 508

(c) 510

(b) 509

(d) 511

41. Martin believes that he can predict his score on the BCA Math Competition. He thinks he knows enough to answer 35 questions correctly. However, He knows that he is careless, so he subtracts 15 due to careless errors. Then he adds 5 questions to his total, because checking over his work will eliminate some errors. How many questions does Martin think he can answer correctly in his final prediction?

(a) 23

(c) 16

(b) 12

(d) 25

42. Josh needed some help writing questions for the Academy Competition. He received 5 questions from each person that sent him an email. He received 2 emails the first week, 3 emails the second week, and so on until he received 8 emails the seventh week. How many questions did Josh receive in total?

(a) 175

(b) 165

(c) 145

(d) 185

43. It is the year *Googolplex* and the whole world is voting for 1 President. Electoral College votes are distributed by the fraction of the world population. If China has 31 of the world's population and India has 83 of the world's population, and there are 2400 Electoral College votes, then how many of these votes are given to China and India?

(a) 1400

(b) 1700

(c) 1200

(d) 1800

44. The cost of BCA math camp is $50 per student. However, Mr. Holbrook buys 5 dozen donuts every day for the 16 days. If donuts cost $10 per dozen, how many students need to attend math camp in order for Mr. Holbrook to break even?

(a) 13

(b) 12

(c) 16

(d) 15

45. What is the value of (-3)x(-2) – (-4) ?

(a) 10

(b) 11

(c) 12

(d) 13

46. Walt Disney's stock starts at $100 dollars per share. If the stock rises 20% and falls by 20% of the new price, what is the new stock price in dollars?

(a) 47

(b) 69

(c) 96

(d) 24

47. If 1 Tom is equal to 7 Fan, 2 Harry is equal to 1 Husk, and 14 Tom is equal to 1 Husk, then how many Fan make up a Harry?

(a) 46
(c) 48
(b) 47
(d) 49

48. If 1 Tom is equal to 7 Fan, 2 Harry is equal to 1 Husk, and 14 Tom is equal to 1 Husk, then how many Fan make up a Harry?

(a) 64
(c) 84
(b) 93
(d) 49

49. Yoonjoo wants to sell 60 identical pencils in groups of 5 or 2. In how many ways can the pencils be grouped?

(a) 7
(c) 9
(b) 6
(d) 5

50. Find the area of the circle whose radius is 7cm

(a) $6\pi$ sq.cm

(b) $39\pi$ sq. cm

(c) $49\pi$ sq.cm

(d) $7\pi$ sq.cm

Answers

| | | | | | |
|---|---|---|---|---|---|
| 1. c | 2. b | 3. a | 4. d | 5. b | 6. d |
| 7. c | 8. a | 9. d | 10. d | 11. c | 12. b |
| 13. a | 14. b | 15.d | 16. a | 17. c | 18. c |
| 19. d | 20. b | 21. a | 22. d | 23. a | 24. d |
| 25. b | 26. d | 27. b | 28. b | 29. c | 30. a |
| 31. c | 32. c | 33. c | 34. b | 35. a | 36. d |
| 37. c | 38. b | 39. b | 40. a | 41. d | 42. a |
| 43. b | 44. c | 45. a | 46. c | 47. d | 48. b |
| 49. a | 50. c | | | | |