1. a, b, c are whole numbers satisfying the condition $1 < a < b < c < 7$, and the product ac is odd. What is the value of b?

(a) 7

(b) 4

(c) 3

(d) 2

2. Kemp just got up from his seat and is headed for the fridge. He can carry various amounts of snacks: one bag of chips, one candy bar, and one soda; OR 4 candy bars; OR 3 bags of chips; OR two cans of soda. There are 5 brands of chips, 4 brands of soda, and 6 brands of candy bars. In the case Kemp carries the same kind of snacks, each of them have to be of a different brand. How many combinations of snacks can Kemp bring back to his seat?

(a) 108

(b) 137

(c) 151

(d) 100

3. Jack is playing a children's card game. He will win if he draws at least one fire, one water, one dark, one earth, and one wind type card within the next 5 draws. If Jack deck is composed solely of 1/5 of each type and one of the draws does not affect the chances of the next draw, find the probability of Eric winning.

(a) 31/225

(c) 51/625

(b) 28/225

(d) 24/625

4. The only animals on Farmer Justin's farm are cows and chickens. If Justin counts a total of 45 heads and a total of 126 feet, find the number of cows on Justin's farm.

(a) 15

(c) 17

(b) 18

(d) 16

5. David is baking cupcakes. Of the cupcakes he bakes, 3/5 of them are red velvet cupcakes. Of the red velvet cupcakes, 1/3 of them have red icing, and of those cupcakes, another 1/2 have red sprinkles. If David baked a total of 120 cupcakes, how many cupcakes does he have that have red sprinkles, red icing, and are red velvet, after he gives 1 of them to James?

(a) 11

(c) 12

(b) 13

(d) 14

6. Richardson took the AMC test with 25 questions. For every question he got right, he earned 10 points, and for every question he got wrong, he lost 2.5 points. He answered every question, and got a score of 150. How many questions did he get right?

(a) 12

(c) 17

(b) 20

(d) 10

7. What is the last digit of 2^{64} ?

(a) 8

(c) 6

(b) 5

(d) 7

8. A snail is at the bottom of a 6 meter well. Each day the snail walks up 2.5 meters but at night it slips down 1.5 meters. On which day will the snail to get out of the well?

(a) 5 th day

(b) 2 nd day

(c) 8 th day

(d) 4 th day

9. What is GCF (14, 16, 8) x L.C.M (14, 16, 8)?

(a) 115

(b) 224

(c) 225

(d) 114

10. In a single-elimination tournament, a competitor is eliminated every time a game is played. 100 members of the math team compete in such one tournament for the top prize. How many games should be played until one person emerges at the top to claim the prize?

(a) 11

(b) 55

(c) 22

(d) 99

11. As an attempt to gain weight, Jongwhan eats 10 cupcakes on day 1, and every day eats 4 cupcakes more than he the day before, starting on day 2. Meanwhile, as an attempt to lose weight, Michael eats 100 cupcakes on day 1, and every day eats 3 cupcakes less than he did the day before, starting on day 2. Find the total number of cupcakes consumed by Jongwhan and Michael starting from day 1 to day 30.

(a)1415

(c) 3735

(b) 2765

(d) 5755

12. Find the area of an equilateral triangle with side length 4.

(a) $2\sqrt{3}$

(c) $4\sqrt{3}$

(b) $3\sqrt{3}$

(d) $5\sqrt{3}$

13. If $x + y = 3$ and $x + 2y = 7$, find $x + 3y$.

(a) 11

(c) 13

(b) 12

(d) 14

14. A number a is called a divisor of b if a divides into b evenly. For example, 3 is a divisor of 12, while 5 is not. Find the number of positive integer divisors of 30.

(a) 8

(b) 7

(c) 6

(d) 5

15. There is a positive integer n such that the sum of the digits of n is equal to n, and 7 divides n. Find n.

(a) 5

(b) 7

(c) 10

(d) 8

16. Alice, Bob, Caroll, Dave, and Eve are all standing in a line. Alice is standing next to Dave, Eve is in front of Carol, and Bob is immediately after Eve. Carol is standing immediately after Dave. Who is standing in the middle of the line?

(a) Alice

(b) Dave

(c) Bob

(d) Eve

17. The average (arithmetic mean) of six numbers in a list is 64. The average of the first two numbers is 26. What is the average of the last four numbers?

(a) 91

(b) 81

(c) 90

(d) 83

18. 25 consecutive integers sum to 700. What is the largest of these numbers?

(a) 21

(b) 10

(c) 40

(d) 30

19. Brian chooses the numbers 10, 24, 18, and 8, and Jason chooses 20, 9, 12, and 16. What does Brian get if he multiplies his numbers together, and divides this by the number he gets when he multiples Jason's numbers together?

(a) 5

(b) 1

(c) 3

(d) 7

20. Isabel was hungry, and so she ate 1/5 of a full pizza. Jie ate 1/2 of what was left. If they both ate a whole number of slices, what is the least number of slices that the pizza was originally cut into?

(a) 5

(c) 2

(b) 3

(d) 9

21. Victoria finds 6 coins each time she goes out, but among them, 4 are always fake. How many times does she have to go out to get the minimum of 25 real coins?

(a) 11

(c) 12

(b) 13

(d) 14

22. Mary buys a textbook that has an original price of $40 at 20% off. Find the amount of money she saved by buying her textbook when it was on sale.

(a) $4

(c) $7

(b) $5

(d) $8

23. Compute the volume of a cube that has a surface area of 384.

(a) 420
(c) 512
(b) 602
(d) 331

24. What two-digit number evenly divides both 437 and 551?

(a) 19
(c) 22
(b) 23
(d) 34

25. 30 + 60 + 90 + 120 = (1 + 2 + 3 + 4)?

(a) 30
(c) 13
(b) 12
(d) 29

26. Calculate 25 x 25 x 16 x 64.

(a) 590000
(c) 490000
(b) 640000
(d) 690000

27. Express the following in single fraction

$$\frac{1}{3}+\frac{1}{8}+\frac{1}{15}+\frac{1}{24}+\frac{1}{35}+\frac{1}{48}+\frac{1}{63}+\frac{1}{80}$$

(a) 12/45

(c) 11/45

(b) 28/45

(d) 29/45

28. Find (7/5) – (1/3) in lowest terms.

(a) 11/15

(c) 16/15

(b) 8/5

(d) 4/5

29. A Gigantic man named David likes to eat Veggie Loops. On Mondays he eats 10 Veggie Loops. On Tuesdays, he eats 20 Veggie Loops. On Wednesdays he eats 30 Veggie Loops. If this pattern continues, how many Veggie Loops will he eat in one week?

(a) 280

(c) 312

(b) 221

(d) 132

30. Hot dogs are sold in packages of 6 and hot dog buns are sold in packages of 8. If you want to match every hot dog you buy with a bun, what is the least number of bun packages you need to accommodate 4 packages of hot dogs?

(a) 1

(c) 2

(b) 5

(d) 3

31. You are playing a game of hearts with your three friends. Each person is dealt 13 cards from a standard 52 card deck. What is the probability that you get the ace of diamonds?

(a) 1/4

(c) 1/2

(b) 1/3

(d) 1

32. A cat runs in a circular path of radius 16 feet. If the cat completes exactly one run around the circle, then how many feet will the cat have travelled? Round your answer to the nearest foot.

(a) 180

(c) 101

(b) 150

(d) 192

33. Heidi is in line. Counting from either end of the line, Nate is 26th in line. How many people are in the line?

(a) 67

(c) 77

(b) 51

(d) 37

34. A slice of pizza costs $1.50. A pie, which is composed of 8 slices, costs $10. Jason buys 6 pies. How much money did he save by doing this instead of buying all the slices individually?

(a) $12

(c) $16

(b) $21

(d) $48

35. Yumi accidentally added 9 to a number instead of multiplying that number by 9 on a math problem. Her answer was 26. What should she have gotten as an answer?

(a) 143

(c) 155

(b) 145

(d) 153

36. Evaluate 40% of 400.

(a) 130

(b) 140

(c) 160

(d) 150

37. James and Steven shared a blueberry pie with 8 equally-sized slices. The cost of a plain pie was $8, and the cost of adding whipped cream to one half of a pie was $1. Steven ate four slices of whipped cream pie and one slice of plain pie. James ate the remainder. Each then paid for what he ate. How many more dollars did Steven pay than James?

(a) $2

(b) $3

(c) $6

(d) $4

38. The sum of three consecutive integers is 30. What is their product?

(a) 943

(b) 990

(c) 955

(d) 953

39. It takes 26 Gigantic men to slay a dragon. If there are 64 Gigantic men, how many dragons can they slay?

(a) 1

(b) 3

(c) 4

(d) 2

40. The formula for converting Celsius temperatures to Fahrenheit temperatures is

$$F = \frac{9}{5}C + 32.$$

Now Convert 45^0 C to degrees Fahrenheit.

(a) 113° F

(b) 213° F

(c) 313° F

(d) 413° F

41. What is the sum that is most likely to be obtained by rolling two dice at the same time? (Each die is numbered 1-6)

(a) 7

(b) 8

(c) 3

(d) 9

42. Two fair six-sided dice are rolled. What is the probability that the sum of the numbers that are rolled is eleven?

(a) 1/17

(c) 1/18

(b) 1/19

(d) 1/20

43. My favorite number is 6446. There is one special number that I can multiply by 11 to obtain 6446. What is this number?

(a) 485

(c) 585

(b) 486

(d) 586

44. Angel County Academies decides to host a 26 mile race on their track. Given that one lap is 1 /4 of a mile, find the number of laps a runner must run in order to complete the marathon.

(a) 109

(c) 165

(b) 104

(d) 176

45. Mr. Holbrook is placing math books in the fridge. Since the fridge is full, he has to remove 9 pieces of candy for every math book he adds. If he adds 20 books and there were originally 400 candies, how many pieces of candy will be left when he accomplishes his mission?

(a) 220

(b) 201

(c) 215

(d) 235

46. Find the next number in the sequence: 2, 5, 10, 17, 26, 37, 50,……

(a) 65

(b) 32

(c) 24

(d) 54

47. I am four years younger than Dennis, Dennis is 6 years older than Eric, and Eric is 19, how old am I?

(a) 18

(b) 54

(c) 21

(d) 72

48. Sungjae, David, and Alex have 64 marbles. Sungjae has as many marbles as David. Alex has 28 marbles. How many marbles does David have?

(a) 26

(b) 18

(c) 12

(d) 32

49. Compute $5^2+4^2+3^2+2^2+1^2$

(a) 10

(b) 22

(c) 30

(d) 55

50. How many positive multiples of 17 are less than 100?

(a) 8

(b) 9

(c) 5

(d) 6

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