Practice Set 2

1. The number 567xy is completely divisible by 30. he possible of x and y can be
(a) 0 and 0 (b) 1 and 0
(c) 2 and 0 (d) 0 and 1

2. Sudha purchased 3 kg potato from market. She used 1/3 of it in cooking baked potatoes and ½ of remaining in mixed vegetables. What quantity of potatoes is she left with
(a) 1.5 kg (b) 2 kg (c) 1 kg (d) 2.5 kg

3. If 1= (3/4) (1+ (y/x) then
(a) x=3y (b) x=y/3
(c) x=(2/3)y (d) None

4. If a three digit number 'abc' has 2 factors (where a, b, c are digits), how many factors does the 6- digit number 'abcabc' have?
(a) 16 (b) 24 (c) 18 (d) 30

5. Find approximate value of
59.987/2.102+1.187*18.02
(a) 52 (b) 16 (c) 86 (d) none

6. There are 6561 balls out of them 1 is heavy. Find the min. no. of times the balls have to be weighed for finding out the heavy ball.
(a) 6 (b) 7 (c) 8 (d) 9

7. Which one of the following fractions is arranged in ascending order?
(a)9/11,7/9,11/13,13/14
(b) 7/8,9/11,11/13,13/14
(c) 9/11,11/13,7/8,13/14
(d) None

8. 0 <x < 1: Which is greater? (1/(x^2), 1/x,x,x^2)
(a) x^2 (b) x (c) 1/x (d) 1/x^2

9. Sameer plants 7225 plants, so that there are as many rows as there are trees in a row. How many trees are there in a row?
(a) 75 (b) 95 (c) 85 (d) 65

10. Anita had to multiply two positive integers. Instead of taking 35 as one of the multipliers, she incorrectly took 53. As a result, the product went up by 540. What is the new product?
(a) 1050 (b) 540 (c) 1440 (d)1590

11. If in a 2 digit no the unit's place is halved and tens place is doubled, then the difference between the numbers is 37. If the digit in unit's place is 2 more than ten's place, then find the number.
(a) 24 (b) 46 (c) 42 (d) None

12. A number is to be multiplied by the fraction 4/5. But Samir, by mistake, multiplied it by 5/4 and obtained the number 81 more than the correct one. What was the original number?
(a) 200 (b) 120 (c) 180 (d) 240

13. The citizens of planet nigiet have developed their decimal system in base 7. A certain street in nigiet contains 1000 (in base 7) buildings numbered 1 to 1000. How many 3s are used in numbering these buildings?
(a) 135 (b) 147 (c) 200 (d) 150

14. The square of a two digit number is divided by half the number. After 36 is added to the quotient, this sum is then divided by 2. The digits of the resulting number are the same as those in the original number, but they are in reverse order. The ten's place of the original number is equal to twice the difference between its digits. What is the number?
(a) 44 (b) 45 (c) 46 (d) None of these

15. A two digit number exceeds by 19 the sum of the squares of its digits and by 44 the double product of its digits. Find the number.
(a)72 (b)62 (c)22 (d)12

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16. The denominator of an irreducible fraction is greater than the number by 2. If we reduce the numerator of the reciprocal fraction by 3 and subtract the given fraction from the resulting one, we get 1/15. Find the given fraction
(a) 2/4 (b) 3/5 (c) 5/7 (d) 7/9

17. The reciprocal of the HCF and LCM of two numbers are 1/12 and 1/311 respectively. If one of the numbers is 24, find the other number.
(a) 126 (b) 136 (c) 146 (d) 155.5

18. The difference of two numbers is 1365. On dividing the larger number by the smaller, we get 6 as quotient and the 15 as remainder. What is the smaller number?
(a) 240 (b) 270 (c) 295 (d) 360

19. The HCF and LCM of two numbers are 11 and 385 respectively. If one number lies between 75 and 125, then that number is :
a) 77 b) 88 c) 99 d) 110

20. Two numbers are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is :
a) 27 b) 33 c) 49 d) 55

21. Find the smallest positive number which is exactly divisible by 1/3, 1/2, 3/7, 4/11.
(a) 10 (b) 11 (c) 12 (d) 14

22. What is the least number, which leaves a remainder 4 when divided by 6 and 5 when divided by 7?
a) 40 b) 42 c) 45 d) 47

23. What is the greatest length that can be used to measure exactly the following lengths 20 ft, 13ft 9 inches, 17ft 6 inches and 21 ft 3 inches?
a) 1 ft b) 3 inches
c) 1ft 3 inches d) None of these

24. Three friends divided some bullets equally. After all of them shot 4 bullets the total number of remaining bullets is equal to that of has after division. Find the original number divided.
(a) 18 (b) 24 (c) 12 (d) 16

25. HCF of two numbers is 11 and their LCM is 693. If one number is 77, find the other number.
(a) 7 (b) 9 (c) 63 (d) 99

26. If the sum of two numbers is 20 and their HCF and LCM are 1 and 91 respectively, then the square of one of the numbers is
(a) 16 (b) 25 (c) 36 (d) 49

27. If both 112 and 33 are factors of the number a * 43 * 62 * 1311, what is the smallest possible value of 'a'?
a) 121 b) 363 c) 616 d) 33

28. Find the number of factors of 12!
(a) 264 (b) 528 (c) 792 (d) 2112

29. Find the product of factors of 7056
(a) 84^{48} (b) 84^{44} (c) 84^{45} (d) None of these

30. Find the number of ways of expressing 576 as a product of two distinct factors.
(a) 7 (b) 8 (c) 10 (d) 11

31. The value of $(1/512)^{1/9}$ is
(a) ½ (b) 1/3 (c) ¼ (d) 1/6

32. A number N^2 has 15 factors. How many factors can N have?
(a) 5 or 7 factors (b) 6 or 8 factors
(c) 4 or 6 factors (d) 9 or 8 factors

33. Find the smallest number that has exactly 18 factors.
(a) 180 (b) 216 (c) 240 (d) None of these

34. Find the last digit of $222^{888} + 888^{222}$
(a) 1 (b) 2 (c) 3 (d) 0

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35. Find the last digit of the expression:
$1^2 + 2^2 + 3^2 + 4^2 + \ldots\ldots + 100^2$.
(a) 0 (b) 1 (c) 2 (d) 3

36. Find the unit digit of the expression:
$888^{888!} + 222^{222!} + 333^{333!} + 777^{777!}$.
(a)3 (b) 4 (c) 5 (d) 6

37. What is the remainder of 1421 * 1423 * 1425 when divided by 12?
(a) 1 (b) 2 (c) 3 (d) 4

38. When a number is divided by 36, it leaves a remainder of 19. What will be the remainder when the number is divided by 12?
(a) 10 (b) 7 (c) 19
(d)192 (e)None of these

39. What is the remainder when 6^17 + 17^6 is divided by 7?**(TCS- 2015)**
(a) 1 (b) 3 (c) 6 (d) 0

40. What is the remainder when 334^{334} is divided by 7?
(a) 1 (b) 2 (c) 3 (d) 4

41. Find the sum of the numbers divisible by 3 which lie between 1 and 100.
(a) 1753 (b) 1683 (c) 1475 (d) 1673

42. Which term of the Arithmetic series, 5/6 , 8/9, 17/18, 1… is 23/6
(a) 54 (b) 52 (c) 55 (d) 56

43. Determine the 8th term of the GP, whose 12^{th} term is 3072 and common ratio is 2
(a) 64 (b) 192 (c) 1024 (d) 256

44. Find the sum to n terms of
4+44+444+4444+…
a) 4/3[10/9 (10n-1)-n]
b) 2/9[10/9 (10 n-1)-n]
c) 4/9[{10*(10 n-1)}/9]-n
d) 4/9[10/9 (10 n-1)-2n]

45. Find the common ratio of the GP, whose first and last terms are 2 and 243/16 respectively and the sum of the GP is 665/16.
a)1/2 b) 2/3 c) 5/2 d) 3/2

46. If four GM are inserted between 11 and 352, then find the fourth GM.
a)44 b)133 c)176 d)132

47. A ball is dropped from a height of 1250m. It rebounds to four fifths of the height from which it falls. If it continues to fall and rebound this way, how much distance does the ball cover totally before coming to rest?
a)1562.50m b)11250 m
c)5000 m d)6250 m

48. There are n arithmetic means between 2 and 66 such that the first mean: last mean is = 1:16. Find the value of n.
a) 29 b) 30
c) 31 d) 28

49. Find the first term and common ratio respectively of a GP whose 7th term is 448 and 11th term is 7,168. (r>0)
a) 7;2 b)7;3
c) 14;1/2 d) 14;1/3

50. Find the three terms of an AP such that their sum is 30 and product is 910
a) 8,10,12 b) 7,10,13
c) 6,10,14 d) 5,13,14