CLASS 8
SUBJECT :Arithmetic Work sheet13 answer key
Marks:15PLAYING WITH NUMBERS
Date:27.2.21

Answer all thefollowing questions(1×15=15)

1. When the sum of a 2-digit number ab and number obtained by reversing the digits is divided by (a + b), the quotient is
   (a) a – b
   (b) 9
   (c) 11
   (d) None of these

   Solution:

   A 2-digit number ab and number obtained by
   reversing the digit is divided by (a + b), then the quotient is 11. (c)

2. When the sum of a 3-digit number abc and numbers obtained by changing the order of the digits cyclically is divided by 111, then the quotient is
   (a) 37
   (b) a – b + c
   (c) a + b + c
   (d) 3
   Solution:

   Sum of 3-digit number abc and number obtained by
   changing the order of the digits cyclically is divided by 111,
   then quotient is a + b + c. (c)

3. If A + A + A = BI, where A and B are different digits, then
   (a) A = 1, B = 5
   (b) A = 5, B = 2
   (c) A = 5, B = 1
   (d) A = 7, B = 2
   Solution:

   A + A + A = BI, where A and B are different digits then A = 7, B = 2.
   As unit digit of sum = 1
   $\therefore$ A will be $\frac{21}{3}$ = 7
   {$\because \frac{11}{3}, \frac{31}{3}$ are not naturals}
   $\therefore$ A = 7, B = 2 (c)

4. Which of the following numbers is not divisible by 2?
   (a) 437218
   (b) 437821
   (c) 437812
   (d) 437182
   Solution:

   Which of the following is not divisible by 2

   437821 as it's unit digit is 1. (b)

5. Which of the following numbers is not divisible by 10?
   (a) 32570
   (b) 32750
   (c) 32500
   (d) 32075
   Solution:

   Which of the given number is not divisible by 10

   32075, (as it's unit digit is not zero) (d)

6. Which of the following numbers is divisible by 4?
   (a) 98764
   (b) 98746
   (c) 98674
   (d) 98647
   Solution:

   Which of given number is divisible by 4.

   98764 as number forming last two digits is 64

   which is divisible by 4. (a)

7. Which of the following numbers is divisible by 8?
   (a) 32466
   (b) 32476
   (c) 32486
   (d) 32456
   Solution:

   Which of the following is divisible by 8.

   32456 as number formed by last three digits 456 is divisible by 8. (d)

8. Which of the following numbers is divisible by 11?
   (a) 725824
   (b) 752824
   (c) 725842
   (d) 725482

Solution:

Which of the following is divisible by 11.

725824 as the difference of the sum of digits at odd places and sum of digit an even place is divisible by 11. (a)

9. Which of the following numbers is not divisible by 9?
   (a) 24354
   (b) 24453
   (c) 24534
   (d) 24564
   Solution:

   Which of the following is not divisible by 9.

   24564 as the sum of its digits is not divisible by 9. (d)

10. If 467×8 is divisible by 3, then the value of x
    (a) 1
    (b) 2
    (c) 3
    (d) 4
    Solution:

    ∵ 467×8 is divisible by 3

    ∴ $4 + 6 + 7 + 8 + x = 25 + x$ is divisible by 3

    ∴ $25 + x = 27, 30, 33$

    ∴ $x = 2, 5, 8$

    $x = 2$ (b)

11. If 36x52y8 is divisible by 9, then x + y is
    (a) 2
    (b) 3
    (c) 4
    (d) 5
    Solution:

    ∵ 36x52y8 is divisible by 9

    ∴ $3 + 6 + 5 + 2 + 8 + x + y$

    ⇒ $24 + x + y$ is divisible by 9

    $24 + (x + y) = 27$

    $x + y = 27 - 24 = 3$ (b)

12. If the division N ÷ 5 leaves remainder 4 and the division N ÷ 2 leaves remainder 1, then unit's digit of N must be
    (a) 9
    (b) 10
    (c) 8
    (d) 20

Solution: a , 9

13. The sum of a 2-digit number and number obtained by reversing the digits is always divisible by

(a) 12
(b) 11
  (c) 10
  (d) 7
  Solution: b , 11

14. The difference of a 2-digit number and number obtained by reversing the digits is always divisible by
  (a) 8
  (b) 6
  (c)9
  (d) 2
  Solution: c , 9

15. The next number of the series 0, 1, 1, 2, 3, 5, 8, 13, is
  (a) 24
  (b)2
  (c)21
  (d)14
  Solution: c , 8+13=21 , Fibonacci Series

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