21- What least value must be assigned to * so that the number 86325*6 is divisible by 11?

- **A.**1
- **B.**2
- **C.**3
- **D.**5
- **E.**None of these

Answer & Explanation

Answer - **C** (3)

Explanation - (6 + 5 + 3 + 8) - (x + 2 + 6) = (14 - x). Now, (14 - x) is divisible by 11, when x = 3

22- The smallest three-digit prime number is:

- **A.**104
- **B.**103
- **C.**107
- **D.**100
- **E.**None of these

Answer & Explanation

Answer - **E** (None of these)

Explanation - 100 is divisible by 2, so it is not prime.

101 is not divisible by any of the numbers 2, 3, 5, 7. So, it is prime.

Hence, the smallest 3-digit prime number is 101

23- In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, the dividend is:

- **A.**4236
- **B.**4306
- **C.**4336
- **D.**5336
- **E.**None of these

Answer & Explanation

Answer - **D** (5336)

Explanation - Divisor = (5 x 46) = 230.

Also, 10 x Q = 230

Q = 23. And, R = 46.

Dividend = (230 x 23 + 46) = 5336

24- A number when divided by 119 leaves 19 as remainder. If the same number is divided by 17, the remainder obtained is:

- **A.**2
- **B.**3
- **C.**7
- **D.**10
- **E.**None of these

Answer & Explanation

Answer - **A** (2)

Explanation - Number = (119 x Q) + 19 = 17 x (7Q) + (17 + 2) = 17 x (7Q + 1) + 2

Required remainder = 2

25- There are four prime numbers written in ascending order. The Product of the first three is 385 and that of the last three is 1001. The last number is:

- **A.**11
- **B.**13
- **C.**17
- **D.**19
- **E.**None of these

Answer & Explanation

Answer - **B** (13)

Explanation - Let the given prime numbers be a, b, c, d. Then, abc = 385 and bcd = 1001

$$\frac{abc}{bcd} = \frac{385}{1001} \qquad \frac{a}{d} = \frac{5}{13}, \text{ So, } a = 5, d = 13.$$

26- The smallest number that must be added to 803642 in order to obtain a multiple of 11 is:

- **A.**1
- **B.**4
- **C.**7
- **D.**9
- **E.**None of these

Answer & Explanation

Answer - **C** (7)

Explanation - On dividing 803642 by 11, we get remainder = 4.

Required number to be added = $(11 - 4) = 7$

27- 1399 x 1399 = ?
- **A.**1687401
- **B.**1901541
- **C.**1943211
- **D.**1957201
- **E.**None of these

Answer & Explanation

Answer - **D** (1957201)

Explanation - $(1399 \times 1399) = (1399)^2 = (1400 - 1)^2 = (1400)^2 + 1^2 - 2 \times 1400 \times 1$

$$= 1960000 + 1 - 2800 = 1960001 - 2800 = 1957201$$

28- Which of the following numbers is exactly divisible by 24?
- **A.**35718
- **B.**537804
- **C.**63810
- **D.**3125736
- **E.**None of these

Answer & Explanation

Answer - **D** (3125736)

Explanation - The required number should be divisible by 3 and 8

(a) 718 is not divisible by 8

(b) 810 is not divisible by 8

(c) 804 is not divisible by 8

(d) Sum of digits = 27, which is divisible by 3

And, 736 is divisible by 8. So given number is divisible by 3 and 8

29- If x is a whole number, then x^2 (x^2 - 1) is always divisible by :
- **A.**12
- **B.**24
- **C.**12 - x
- **D.**Multiple of 12
- **E.**None of these

Answer & Explanation

Answer - **A** (12)

Explanation - Putting x = 2, we get 2^2 (2^2 - 1) = 12. So, $x^2(x^2$ - 1) is always divisible by 12.

30- 325325 is a six-digit number. It is divisible by:
- **A.**7 only
- **B.**11 only
- **C.**13 only
- **D.**All 7, 11 and 13
- **E.**None of these

Answer & Explanation

Answer - **D** (All 7, 11 and 13)

Explanation - Clearly, 325325 is divisible by all 7, 11 and 13