

Q1:

### Sum of the numbers

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The sum of squares of 3 consecutive positive numbers is 365. The sum of the numbers:

#### Options

- 30
- 33
- 36
- 50

Correct Answer : **33**

Q2:

### How many numbers?

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The sum of a two digit number and the number obtained by reversing its digits is a square number. How many such numbers are there?

#### Options

- 5
- 6
- 7
- 8

Correct Answer : **8**

Q3:

### What's the remainder?

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When a number is divided by 357 the remainder is 39. If that number is divided by 17, the remainder will be:

#### Options

- 0
- 3
- 5
- 11

Correct Answer : **5**

Q4 :

### Ratio Of Boys To Girl

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In a school  $\frac{1}{10}$  of the boys are the same in number as  $\frac{1}{4}$  of the girls. The ratio of the boys to girls in that school is:

### Options

2:1  
5:2  
4:3  
3:2

Correct Answer : **5 : 2**

Q5 :

### Final Fraction

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The numerator of a fraction is four less than its denominator. If the numerator is decreased by 2 and the denominator is increased by 1, then the denominator becomes eight times the numerator. Find the fraction:

### Options

$\frac{3}{8}$   
 $\frac{3}{7}$   
 $\frac{4}{8}$   
 $\frac{2}{7}$

Correct Answer:  $\frac{3}{7}$

Q6:

### Term Of Ap

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Which term of the AP: 3, 15, 27, 39, ... will be 132 more than its 54th term?

### Options

65  
66  
63  
76

Correct Answer

### Solution Description

common difference  $d = 12$ ,  
 $132/12 = 11$

So,  $54 + 11 = 65$ th term will be 132 more than the 54th term. Hence, option a is correct.

Q7 :

### Divisible by 7

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How many three digit numbers are divisible by 7?

### Options

128  
166  
193  
156

Correct Answer

### Solution Description

Smallest three digit number divisible by 7 is 105.

Greatest three digit number divisible by 7 is 994.

Required number of terms

$$= \{(\text{last term} - \text{first term}) / \text{common difference}\} + 1$$

$$= \{(994 - 105) / 7\} + 1$$

$$= (889 / 7) + 1 = 127 + 1 = 128. \text{ Hence, option (a) is correct.}$$

Q8:

### Find the term?

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An AP consists of 50 terms of which 3rd term is 12 and the last term is 106. Find the 29th term.

### Options

73  
64  
34  
96

Correct Answer

### Solution Description

$$12 = a + 2d$$

$$106 = a + 49d$$

$$\text{So, } 106 - 12 = 47d$$

$$\text{Or, } 94 = 47d$$

$$\text{Or, } d = 2$$

$$\text{Hence, } a = 8$$

$$29\text{th term} = 8 + 28 \times 2 = 64. \text{ Hence, option b is correct.}$$

Q9:

### Find the 20th term

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Find the 20th term from the last term of the AP: 3, 8, 13, ....., 253.

### Options

187  
158  
169  
189

Correct Answer

## Solution Description

$$a = 3, d = 5$$

$$253 = 3 + 5(n-1)$$

$$\text{Or, } 5(n-1) = 250$$

$$\text{Or, } n-1 = 50$$

$$\text{Or, } n = 51$$

So, the 20th term from the last term =  $51 - 19 = 32^{\text{nd}}$  term

Now,  $32^{\text{nd}}$  term =  $3 + 5 \times 31 = 158$ . Hence, option b is correct.

Q10:

## Sum of numbers

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What is the sum of all 3 digit numbers that leave a remainder of '2' when divided by 3?

## Options

897

164850

164749

149700

[Correct Answer](#)

## Solution Description

The smallest number that will leave a remainder of 2 when divided by 3 is 101

The largest 3 digit number that will leave a remainder of 2 when divided by 3 is 998.

So, it is an AP with the first term being 101 and the last term being 998 and common difference being 3.

$$\text{Therefore } 998 = 101 + (n - 1) \times 3$$

$$897 = (n - 1) \times 3$$

$$n - 1 = 299$$

$$n = 300.$$

Required sum =  $300/2 \times (101 + 998) = 164850$ . Hence, option b is correct.

Q11:

## Find numbers?

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The sum of the three numbers in A.P is 21 and the product of their extremes is 45. Find the numbers.

## Options

5,7 and 9

9,7 and 5

Both a and b

None Of These

[Correct Answer](#)

## Solution Description

Let the numbers be  $a - d$ ,  $a$ ,  $a + d$ .

$$\text{Then } a - d + a + a + d = 21$$

$$3a = 21$$

$$a = 7$$

According to the question:  $(a - d)(a + d) = 45$

$$a^2 - d^2 = 45$$

$$d^2 = 4$$

$$d = +2$$

Hence, the numbers are 5, 7 and 9 when  $d = 2$  and 9, 7 and 5 when  $d = -2$ . In both the cases numbers are the same.

Hence, option c is correct.

Q12:

### Find the 11th term?

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Find the 11th term of the series 1, 4, 16, .....

### Options

$$4^{10}$$

$$4^9$$

$$4^{11}$$

None Of These

[Correct Answer](#)

### Solution Description

The nth term of the G.P. =  $ar^{(n-1)}$  (a is the 1st term and r is the common ratio)

First term of the series = 1 common ratio = 4.

11th term of the series =  $1 \cdot 4^{(11-1)} = 4^{10}$ . Hence, option a is correct.

Q13:

### Find sum of series?

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Find sum of the series 4, 2, 1, 0.5, 0.25, .....

### Options

$$4$$

$$8$$

$$1$$

None of These

[Correct Answer : 8](#)

Q14:

### What will be the first term?

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The seventh term of a GP is 16 times the 3rd term. What will be the 1st term when it's 4th term is 24?

### Options

$$2$$

- 3
- 4
- 5

Correct Answer: 3

Q15:

**Find the remainder?**

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Find the remainder of  $(80 \times 81 \times 84)/85$ ?

**Options**

- 20
- 45
- 65
- 39

Correct Answer

**Solution Description**

$$(80 \times 81 \times 84)/85 \Rightarrow (-5 \times -4 \times -1)/85 = -20 / 85$$

The remainder is -20 which is equal to  $-20 + 85 = 65$ .

Hence, option c is correct.

Q16:

**Again find remainder?**

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Find the remainder of  $(20^{127})/7$ .

**Options**

- 1
- 2
- 3
- 6

Correct Answer

**Solution Description**

Remainder of  $(ax-1)^n/a$  always gives a remainder -1 or a-1 (if n is odd.)

It gives a remainder of -1 or  $-1+7=6$ . Hence, option d is correct.

Q17:

**Whats the remainder?**

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$(20 \times 23 \times 24 \times 26)/100$  will give a remainder =?

**Options**

20  
15  
10  
40

Correct Answer: 40

Q18:

**Find again remainder?**

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Find the remainder when  $66^{105}$  is divided by 17.

**Options**

15  
7  
6  
8

Correct Answer: 15

Q19:

**Sum of single digit**

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What is the sum of the single digit numbers which cannot be the unit (last) digit of any perfect square?

**Options**

18  
9  
20  
12

Correct Answer

**Solution Description**

The digits which cannot be the last digit of any perfect square are 2, 3, 7 and 8

The required sum =  $2 + 3 + 7 + 8 = 20$

⇒ option (c )

Q20:

**What is unit digit?**

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What is the unit's digit of the number  $23^{34} \times 34^{57} \times 57^{61}$ ?

**Options**

9  
8  
2  
6

Correct Answer

### Solution Description

The unit's digit of  $23^{34} = 9$

The unit's digit of  $34^{57} = 4$

The unit's digit of  $57^{61} = 7$

The unit digit of the number  $23^{34} \times 34^{57} \times 57^{61} = \text{Unit's digit of } (9 \times 4 \times 7) = 2$

Q21:

### What will be last digit ?

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What will be the last two digits of the following expression  $67 \times 54 \times 29 \times 28 \times 47$ ?

### Options

25

13

52

26

Correct Answer: **52**