SRIHARI MATHEMATICS ACADEMY
(TUITION CUM COACHING CENTRE)
2/276-G K.G.NAGAR, SULUR(T.K), KALANGAL(P.O),
COIMBATORE(D.T) - 641402
MOBILE: 9944196663 E-mail: rangarajankg@gmail.com

Do it yourself…

Find the quotient and remainder when a is divided by b

1. $a = -40, \quad b = 11$
2. a=-14, b=5
3. a=-26, b=7
4. a=-33, b=9
5. a=-27, b=-3
6. a=-85, b=-10
7. a=-45, b=-8
8. a=-32, b=-4

Using Euclid's Division Algorithm .Find the HCF of

1. 135,225
2. 84,105
3. 595,1071
4. 861,1353
5. 616,1300
6. 196,38220
7. 4052,12576
8. 42237 ,75582

Find LCM and HCF of _____ and _____ by applying the fundamental theorem of arithmetic

1. 24,63
2. 225,240
3. 72,90
4. 96,404

Find the remainders of

1. when 90005 and 998 Is divided by 9
2. when 60003 and 665 Is divided by 6

Prepared by
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Find the least positive value of x

1. $54 \equiv x \pmod 7$
2. $33 \equiv x \ (mod\ 9)$
3. $185 \equiv x \ (mod\ 4)$
4. $1262 \equiv x \ (mod\ 3)$
5. $279 \equiv x \ (mod\ 16)$

Compute x

1. $2^{81} \equiv x (mode\ 17)$

Find the time

1. What is the time 18 hours after 9 a.m. ?
2. What is the time 22 hours after 4 a.m. ?
3. What is the time 35 hours after 10 a.m. ?
4. What is the time 71 hours before 9 p.m. ?
5. What is the time 22 hours before 4 a..m. ?

In which day my uncle will be coming?

1. Today is Tuesday uncle will come after 72 days . will be coming?

Find the next three terms of the sequence

1. $\frac{1}{3}, \frac{2}{4}, \frac{3}{5}, \cdots$
2. $\frac{1}{5}, \frac{4}{3}, \frac{9}{4}, \cdots$
3. $\frac{1}{7}, \frac{1}{10}, \frac{1}{13}, \frac{1}{16} \cdots$
4. $9, 18, 36, \cdots$
5. $2, 0 \cdot 2, 0 \cdot 02, \cdots$
6. $4, 0 \cdot 4, 0 \cdot 04, \cdots$
7. $6, 0 \cdot 6, 0 \cdot 06, \cdots$

Find the general tem of the sequence

1. $0, 7, 26, 63, \cdots$

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2. $5, 10, 15 \cdots$
3. $6, 12, 18 \cdots$
4. $-1, 6, 25, 62, \cdots$
5. $3, 9, 19, 33 \cdots$

Find the first four terms of the sequence whose n^{th} terms are given

1. $a_n = \frac{n(n-2)}{3}$
2. $c_n = (-1)^n 3^{n+2}$
3. $z_n = \frac{(-1)^n n(n+2)}{4}$
4. $c_n = \frac{n(n+1)(2n+1)}{6}$

The general term of a sequence is defined as

1. $a_n = \begin{cases} n(n+3); & n \in N \text{ is even} \\ \frac{2n}{n^2+1}; & n \in N \text{ is odd} \end{cases}$

   Find the a_{18} and a_{25}

2. $b_n = \begin{cases} n^2; & n \in N \text{ is even} \\ n(n+2); & n \in N \text{ is odd} \end{cases}$

   Find the b_{13} and b_{16}

Find the first five terms of the following sequence

1. $a_1 = 1, a_2 = 3 + a_1, \quad a_n = 2a_{n-1} + 5$
2. $F_1 = F_2 = 1 \qquad F_n = F_{n-1} + F_{n-2}$
   $n = 3, 4 \cdots$

Find the first six terms of the following sequence

1. 1. $a_1 = 1, a_2 = 1, a_3 = 1 \quad a_n = a_{n-1} + a_{n-2}$
   $n \geq 3, n \in N$

Find F_5

1. Given $F_1 = 1, F_2 = 3 \qquad F_n = F_{n-1} + F_{n-2}$

Check whether the following sequences are in A.P or not?

1. $3m - 1, \qquad 3m - 3, \quad 3m - 5, \cdots$
1. $m, \ m + 3, \qquad m + 6, \quad m + 9, \cdots$

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2. $a,\ a+2,\quad a+4,\quad a+6,\cdots$
3. $1^2,\ 2^2,\ 3^2,\ \cdots$
4. $1^2,\ 3^2,\ 5^2,\ 7^2\ \cdots$
5. $5,\ 5,\ 5,\ 5,\ \cdots$
6. $0,-3,-6,-9,\ \cdots$
7. $a,\ a,\ a,\ a,\ \cdots$
8. $10,\ 4,-2,-8,\ \cdots$
9. $17,\ 12,\ 7,\ 2,-3\cdots$
10. $\frac{2}{3},\frac{4}{5},\ \frac{6}{7},\ \cdots$
11. $\frac{1}{4},\frac{7}{12},\ \frac{11}{12},\ \cdots$
12. $\frac{11}{3},\frac{13}{3},\ \frac{15}{3},\ \cdots$

Write an A.P

1. 1. $a=8,\quad d=3$
2. $a=17,\quad d=-3$
3. $a=8,\quad d=-2$
4. $a=\frac{2}{3},\quad d=\frac{1}{3}$

Find the _____of an A.P

1. $4,9,14,\ \cdots$ 17^{th}
2. $16,19,22,\ \cdots$ 7^{th}
3. $2,5,8,\ \cdots$ 10^{th}
4. $3,7,10,\ \cdots$ 7^{th}
5. $7,17,27,\ \cdots$ 15^{th}
6. $4,7,10,\ \cdots$ 20^{th}
7. $9,13,17,\ \cdots$ 38^{th}
8. $6,11,16,\ \cdots$ 12^{th}
9. $4,11,18,\ \cdots$ 35^{th}
10. $40,43,46,\ \cdots$ 15^{th}
11. $50,55,60,\ \cdots$ 89^{th}

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12. $25, 33, 41, \cdots$ 101^{th}
13. $3, 8, 13, \cdots$ 22^{th}
14. $25, 18, 11, \cdots$ 25^{th}
15. $125, 120, 115, 110, \cdots$ 15^{th}
16. $14, 11, 8, \cdots$ 21^{th}
17. $18, 15, 12, \cdots$ 16^{th}
18. $28, 24, 20, \cdots$ 31^{th}
19. $100, 96, 92, \cdots$ 10^{th}
20. $6, 1, -4, \cdots$ 12^{th}
21. $10, 10 \cdot 5, 11, \cdots$ 10^{th}
22. $15, 15 \cdot 5, 16, \cdots$ 25^{th}
23. $16, 17 \cdot 5, 19, \cdots$ 30^{th}
24. $\sqrt{2}, 3\sqrt{2}, 5\sqrt{2}, \cdots$ 12^{th}

Find the number of terms in the A.P

1. $13, 15, 17, \cdots, 71$
2. $17, 20, 21, \cdots 56$
3. $5, 8, 11, 14, \cdots 320$
4. $4, 6, 8, 10, \cdots 58$
1. $5, 10, 15, \cdots 115$
2. $7, 9, 11, 13, \cdots 97$
3. $21, 42, 63, \cdots 420$
4. $7, 13, 19, \cdots 205$

Which term of an A.P. _____ is _____

1. $9, 0, -9, \cdots, -171$
2. $100, 95, 90, \cdots, -50$
3. $100, 94, 88, \cdots, 16$
4. $10, 13, 16, \cdots, 40$
5. $5, 14, 23, \cdots, 239$
6. $3, 5, 7, \cdots, 27$
7. $10, 13, 16, \cdots, 43$
8. $-3, 0, 3, \cdots, 66$

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9. $24, 23\frac{1}{4}, 22\frac{1}{2}, 21\frac{3}{4}, \cdots, 3$
10. $-1, \frac{-5}{6}, -\frac{2}{3}, \cdots, \frac{10}{3}$
11. $\frac{5}{6}, 1, 1\frac{1}{6}, \cdots, 3\frac{1}{3}$
12. $-1, \frac{-5}{6}, -\frac{2}{3}, \cdots, \frac{2}{3}$

Find the middle term(s) of an A.P

1. $10, 13, 16, \cdots, 43$
2. $11,7, 9, 11, 13, \cdots 97$
3. $5, 8, 11, 14, \cdots 320$
4. $13, 15, 17, \cdots, 71$

Determine the general term of an A.P.

1. Whose 13^{th} term is 29 and 31^{th} term is 65
2. Whose 3^{th} term is 14 and 9^{th} term is -52

Show that thirteenth term is zero.

1. If five times fifth term is equal to the eight times eighth term, show that thirteenth term is zero.