

Frankin Bries Splitting of D'

Sequence Séries Progransions - 7

 $\frac{5}{1^{2}\times2^{2}} + \frac{11}{2^{2}\times3^{2}} + \frac{19}{3^{2}\times4^{2}} + \frac{29}{4^{2}\times5^{2}} - \infty ?$ a) 1 b) 3/2 c) 9/4 d) 9/2 e) rome of theme ? (Q2) 12 1 12+22 + 12+22+32 + ---- whto 42 term? a) 512 b) 616 c) 726 2 d) 582 e) noue 4 there. (83) 2 - distinct 2-digit numbers paginere linkegral A.M. & G.M. — A. & G. serfactively, such that

A can be obtained by interchanging digits of G X.

[130] A vice-verse. Find sum of digits of P19. a) 130 b) 120 c) 90

3)
$$\sqrt{8}$$
 adamy $P, q - 1$ $\frac{P+q}{2} = 10 a + b$
 $P, q - 1$ $\frac{P+q}{2} = 10 a + b$
 $P, q - 1$ $\frac{P+q}{2} = 10 b + a \leftarrow 14$.

 $\sqrt{P+q} = 2 \cdot (10 a + b)$
 $\sqrt{P-q} = 2 \cdot (10 a + b)$

$$P+q = 2(10a+b)$$

$$= 2(1076+5)$$

$$= 130$$

$$\frac{1}{3}$$
, $a^2 - b^2 = 11$

$$(a+b)(a-b)=11 \times 1$$
 $(a+b)(a-b)=11 \times 1$
 1^{2}

$$(a-b) = 11 \times 1$$

$$(a-b) = 11$$

$$(a-b) = 1$$

$$2a = 12$$
 $6^{2} = 26$
 $6^{2} = 36$
 $6 = 5$

7-9 = integn.

2) 801.cademyt
$$n = \frac{1^2 + 2^2 + \dots + n^2}{1 + 2^4 + \dots + n} = \frac{n(n+1)(2n+1)}{83} = \frac{2n+1}{3}$$

$$S_{n} = \underbrace{\Xi t_{n}} = \underbrace{\Xi \left(\underbrace{2n+1}_{3} \right)} = \underbrace{\frac{1}{3}} \left(\underbrace{2\tilde{\Xi}_{n}} + \underbrace{\Xi 1}_{1} \right)$$

$$= \underbrace{\frac{1}{3}} \left(\underbrace{2\tilde{\Xi}_{n}} + \underbrace{\Xi 1}_{1} \right)$$

$$\frac{1}{3} \left(\frac{1}{2} + \frac{2}{3} \cdot \frac{3}{3} \cdot \cdots \right) = \frac{1}{3} \left(\frac{2 \cdot n(n+1)}{2} + n \right)$$

$$\frac{11}{2^{2}\times 2^{2}}$$

$$\frac{(1+2)+(1\times2)}{1^2\times2^2}$$

$$\frac{(2+3)+(2\times3)}{2^2\times3^2}$$

$$= \left(\frac{1}{1} + 2 + \frac{1}{1 \times 2}\right)$$

$$= \left(\frac{1}{1} \times 2^{1} + \frac{1}{1 \times 2}\right)$$

$$\frac{1}{1\times2} + \left(\frac{2+3}{2^{2}\times3^{2}} + \frac{1}{2\times3}\right) + \left(\frac{3+4}{3^{2}\times4^{2}} + \frac{1}{3\times4}\right) + --$$

$$= \frac{1}{1} - \frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{3} + \frac{1}{3} \frac{1}{3$$

$$= 3 \times \left(\frac{1}{1 \times 1}\right)$$

$$A_{m}$$
. $1+1=2$. A .

(Qui) the pun of 1st n (n>3) town of an A.P:p 513. 9f 1st term of the preprence is an integer and the common différence 4 the peries is 2, then find out the number of possible values of n. 8d. Sn = 513 $\frac{2}{2}$ $\left(2a+(m-1)A\right) = 513$ e) 9 $\frac{m}{2} \left[2a + (m-1)2 \right] = 513$ X_{13} , 9, 19.57, 29, 121, 513 \leftarrow 6...N.

20
$$M = 1111 - ... 24$$
 times. Find sum of digits a) 93

 $Y = 3333 - ... 12$ times. in find poin 4 b) 93

 $Z = 4444 - ... 12$ times.

 $X = \frac{34}{2}$.

 $X = \frac{3$

$$25 \times 10 - 2 = 248$$

$$25 \times 10^{2} - 2 = 2498$$

$$25 \times 10^{3} - 2 = 24998$$

$$25 \times 10^{3} - 2 = 24998$$

$$210^{3} - 2 = 24998$$

12 km.

A = 111 --- 1

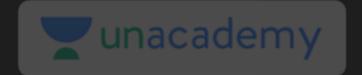
$$\frac{1111}{1111} = 10^{3} \times 1 \times 10^{3} \times 1 \times 10^{4} \times 1 \times 10^{4}$$

$$= 10^{2} (11) + 10^{3} (11).$$

$$= 10^{2} (A) + A.$$

$$\frac{1111}{1111} = 10^{3} \times 1 \times 10^{3} \times 1 \times 10^{4} \times 1 \times 10^{4}$$

$$= 10^{2} (A) + A.$$



Luckions (Shot Jums)