1. $\frac{1}{1*2} + \frac{1}{2*3} + \frac{1}{3*4} + \cdots + \frac{1}{99*100} =?$

   a) $\frac{99}{100}$ (b) $\frac{98}{99}$ (c) $\frac{100}{101}$ (d) $\frac{97}{100}$

2. If $\frac{1}{1\times2} + \frac{1}{2\times3} + \frac{1}{3\times4} + \cdots \ldots + \frac{1}{n(n+1)} = \frac{249}{250}$ then what is the value of n ?

   यदि $\frac{1}{1\times2} + \frac{1}{2\times3} + \frac{1}{3\times4} + \cdots \ldots + \frac{1}{n(n+1)} = \frac{249}{250}$ है तो **n** का मान ज्ञात करो।

   (A) 299   (B) 249   (C) 250   (D) 248

3. $\frac{1}{3*7} + \frac{1}{7*11} + \frac{1}{11*15} + \cdots + \frac{1}{899*903} =?$

   a) $\frac{21}{509}$ b) $\frac{18}{403}$ c) $\frac{25}{301}$ d) $\frac{29}{31}$

4. If $a_1 = \frac{1}{2*5}$, $a_2 = \frac{1}{5*8}$, $a_3 = \frac{1}{8*11}$ then, $a_1 + a_2 + a_3 + \ldots + a_{100} =?$

   a) $\frac{25}{151}$ b) $\frac{30}{157}$ c) $\frac{1}{4}$ d) $\frac{9}{55}$

5. $\frac{1}{7^2 - 3^2} + \frac{1}{13^2 - 3^2} + \frac{1}{19^2 - 3^2} + \ldots + \frac{1}{49^2 - 3^2} =?$

   a) $\frac{1}{26}$ b) $\frac{3}{52}$ c) $\frac{1}{13}$ d) $\frac{3}{26}$

6. $\frac{1}{1+2} + \frac{1}{1+2+3} + \frac{1}{1+2+3+4} + - - - - - - + \frac{1}{1+2+3+\cdots 51} = ?$

   a) $\frac{26}{25}$ b) $\frac{25}{26}$ c) $\frac{15}{17}$ d) $\frac{6}{7}$

7. Evaluate: $\frac{1}{15} + \frac{1}{35} + \frac{1}{63} + \frac{1}{99} + \frac{1}{143}$.

   $\frac{1}{15} + \frac{1}{35} + \frac{1}{63} + \frac{1}{99} + \frac{1}{143}$ का मान ज्ञात कीजिए।

   (a) $\frac{4}{39}$ (b) $\frac{7}{39}$

   (c) $\frac{5}{39}$ (d) $\frac{10}{39}$

8. $\frac{1}{1*2} + \frac{1}{1*4} + \frac{1}{2*3} + \frac{1}{4*7} + \frac{1}{3*4} + \frac{1}{7*10} + \cdots$ upto 20 terms=?

   a)379/308   b)171/140   c)379/310   d)420/341

9. $\frac{1}{1*4*7} + \frac{1}{4*7*10} + \frac{1}{7*10*13} + \frac{1}{10*13*16} + \frac{1}{13*16*19}$

   $a) \frac{25}{608}$ b) $\frac{25}{304}$ c) $\frac{23}{608}$ d) $\frac{23}{304}$

10. $\frac{1}{1*2*3*4} + \frac{1}{2*3*4*5} + \ldots + \frac{1}{15*16*17*18} = ?$

    a) $\frac{815}{14688}$ b) $\frac{815}{7344}$ c) $\frac{713}{14688}$ d) $\frac{713}{7344}$

11. $\frac{1}{1*3*5} + \frac{1}{1*4} + \frac{1}{3*5*7} + \frac{1}{4*7} + \frac{1}{5*7*9} + \frac{1}{7*10} + \ldots$20 times

    a)6179/15275   b)6070/14973   c)7191/15174   d)5183/16923

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12. What is the sum of $1\frac{1}{2} + 4\frac{1}{6} + 7\frac{1}{12} + 10\frac{1}{20}$ **.... Upto 20 terms?**

a) 12410/21   b) 12412/21   c) 12433/21   d) 11794/21

13. What is the value of $\frac{7}{2} + \frac{11}{2} + \frac{7}{6} + \frac{11}{15} + \frac{7}{12} + \frac{11}{35} + \cdots \ldots + \frac{7}{156} + \frac{11}{575}$ **?**

$\frac{7}{2} + \frac{11}{2} + \frac{7}{6} + \frac{11}{15} + \frac{7}{12} + \frac{11}{35} + \cdots \ldots + \frac{7}{156} + \frac{11}{575}$ **का मान क्या है?**

(a) 3816/325   (b) 3714/345

(c) 3216/315   (d) 3917/355

14. The value of $\frac{3}{70} + \frac{1}{42} + \frac{1}{66} + \frac{3}{286} + \frac{1}{130} + \frac{1}{170}$ **is:**

$\frac{3}{70} + \frac{1}{42} + \frac{1}{66} + \frac{3}{286} + \frac{1}{130} + \frac{1}{170}$ **का मान है:**

(a) $\frac{7}{85}$ (b) $\frac{3}{85}$ (c) $\frac{11}{85}$ (d) $\frac{9}{85}$

15. The value of $\frac{3}{1^2*2^2} + \frac{5}{2^2*3^2} + \frac{7}{3^2*4^2} + \frac{9}{4^2*5^2} + \cdots + \frac{19}{9^2*10^2}$ **is:**

(a) $\frac{1}{100}$ (b) $\frac{99}{100}$ (c) 1   (d) $\frac{11}{100}$

16. If $\frac{1}{1^2} + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + - - - - - = \frac{\pi^2}{6}$

Then $\frac{1}{1^2} + \frac{1}{3^2} + \frac{1}{5^2} - - - - - = ?$

a) $\frac{\pi^2}{12}$ b) $\frac{\pi^2}{8}$ c) $\frac{\pi^2}{16}$ d) $\frac{\pi^2}{6}$

17. Simpilify $\frac{\left(1+\frac{27}{1}\right)\left(1+\frac{27}{2}\right)\left(1+\frac{27}{3}\right)\left(1+\frac{27}{4}\right)\ldots\ldots\ldots\left(1+\frac{27}{49}\right)}{\left(1+\frac{49}{1}\right)\left(1+\frac{49}{2}\right)\left(1+\frac{49}{3}\right)\left(1+\frac{49}{4}\right)+\cdots\ldots\ldots\left(1+\frac{49}{27}\right)}$ **?**

A) 1
B) 2
C) 3
D) 21

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