



分数计算技巧

例1

$$(10+876+312) \times (876+312+918) - (10+876+312+918) \times (876+312)$$

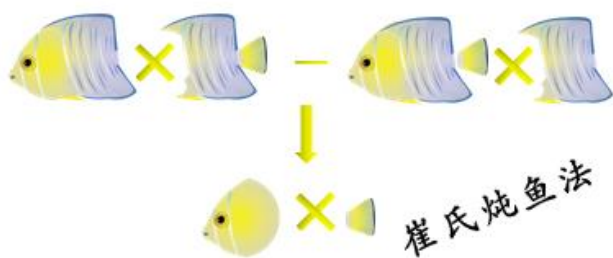
例2

2009年第14届华杯赛决赛试题C卷

$$\text{计算: } (1 + \frac{1}{2} + \frac{1}{4}) \times (\frac{1}{2} + \frac{1}{4} + \frac{1}{6}) - (1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{6}) \times (\frac{1}{2} + \frac{1}{4}) =$$

例3

$$(\frac{1}{5} + \frac{1}{7} + \frac{1}{9} + \frac{1}{11}) \times (\frac{1}{7} + \frac{1}{9} + \frac{1}{11} + \frac{1}{13}) - (\frac{1}{5} + \frac{1}{7} + \frac{1}{9} + \frac{1}{11} + \frac{1}{13}) \times (\frac{1}{7} + \frac{1}{9} + \frac{1}{11})$$



例4

1. (迎春杯竞赛试题)

$$\left(1 + \frac{1}{2} + \dots + \frac{1}{2007}\right) \times \left(\frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{2008}\right) - \left(1 + \frac{1}{2} + \dots + \frac{1}{2008}\right) \times \left(\frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{2007}\right)$$



奥数竞赛班

2. (迎春杯竞赛试题)

$$\left(\frac{621}{126} + \frac{739}{358} + \frac{458}{947}\right) \times \left(\frac{739}{358} + \frac{458}{947} + \frac{378}{207}\right) - \left(\frac{621}{126} + \frac{739}{358} + \frac{458}{947} + \frac{378}{207}\right) \times \left(\frac{739}{358} + \frac{458}{947}\right)$$

例5

(祖冲之杯竞赛试题)

$$\frac{1}{1} + \frac{1}{1+2} + \frac{1}{1+2+3} + \cdots + \frac{1}{1+2+\cdots+100}$$

例6

$$1+2+4+8+\cdots+512 = ?$$

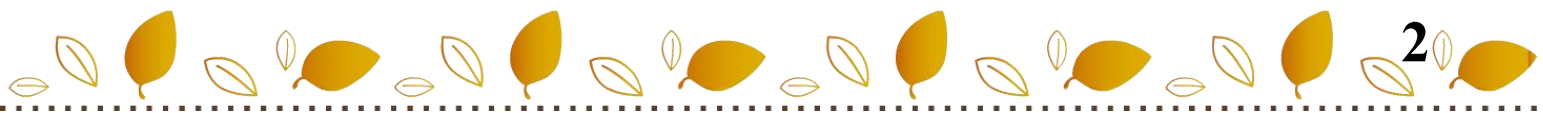


1. 换元抵消 (崔氏炖鱼法)

一个关于鱼头鱼尾的故事……

2. 通项归纳找规律

3. 借来还去





在线测试题

温馨提示：请在线作答，以便及时反馈孩子的薄弱环节！

1. $(1+0.12+0.23)\times(0.12+0.23+0.34)-(1+0.12+0.23+0.34)\times(0.12+0.23)$

- A. 0.12 B. 0.34 C. 0.23 D. 0.56

2. $(1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4})\times(\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5})-(1+\frac{1}{2}+\frac{1}{3}+\frac{1}{4}+\frac{1}{5})\times(\frac{1}{2}+\frac{1}{3}+\frac{1}{4})$

- A. $\frac{1}{2}$ B. $\frac{1}{3}$ C. $\frac{1}{4}$ D. $\frac{1}{5}$

3. $(\frac{321}{123}+\frac{345}{234}+\frac{432}{543})\times(\frac{345}{234}+\frac{432}{543}+\frac{123}{321})-(\frac{321}{123}+\frac{345}{234}+\frac{432}{543}+\frac{123}{321})\times(\frac{345}{234}+\frac{432}{543})$

- A. 1 B. 2 C. 3 D. 4

4. $(\frac{5}{12}+\frac{7}{32}+\frac{3}{17})\times(\frac{7}{32}+\frac{3}{17}+\frac{4}{13})-(\frac{5}{12}+\frac{7}{32}+\frac{3}{17}+\frac{4}{13})\times(\frac{7}{32}+\frac{3}{17})$

- A. $\frac{5}{12}$ B. $\frac{4}{13}$ C. $\frac{5}{39}$ D. $\frac{5}{26}$

5. $\frac{1}{1+2}+\frac{1}{1+2+3}+\frac{1}{1+2+3+4}+\dots+\frac{1}{1+2+\dots+99}$

- A. $1\frac{49}{50}$ B. $1\frac{1}{50}$ C. $\frac{49}{50}$ D. $\frac{11}{50}$

6. 计算： $\frac{1}{2}+\frac{1}{4}+\frac{1}{8}+\frac{1}{16}+\frac{1}{32}+\frac{1}{64}$

- A. $1\frac{63}{64}$ B. $1\frac{1}{64}$ C. $\frac{63}{64}$ D. $\frac{1}{64}$

