

2003 小學數學競賽選拔賽初賽試題

第一試：計算題 (考試時間 1 小時)

◎請將答案填入答案卷對應題號的空格內，不須計算過程。答案若為分數請化為最簡分數。本題目卷正反面空白處可為作演算草稿紙。每題 5 分，共 100 分

1. $9 \times 9 + 9 \div 3 - 3 \times 8 - 5 + 9 =$ _____

2. $25 \times 125 \times 96 =$ _____

3. $3 \times 87 \times 37 =$ _____

4. $(0.75 + 0.45 + 0.15) \div (0.75 \times 0.45 \times 0.15) =$ _____

5. $20032003 + 20320030 + 23200300 + 22003003 + 20030032$
 $+ 20300320 + 23003200 =$ _____

6. $\left(\frac{2}{666} + \frac{4}{666} + \frac{6}{666} + \cdots + \frac{666}{666}\right) - \left(\frac{1}{666} + \frac{3}{666} + \frac{5}{666} + \cdots + \frac{665}{666}\right) =$ _____

7. $\left(\frac{7}{27} \times \frac{9}{2} + \frac{5}{6}\right) \div \left(18\frac{1}{3} - \frac{25}{4} \times \frac{16}{15}\right) =$ _____

8. $\left(6\frac{3}{7} \times 2.5 + 13\frac{4}{7} \times 2.5\right) \div \left(\frac{4}{19} \times 3.232 + 1.768 \times \frac{4}{19}\right) =$ _____

9. $\frac{1+2+3+4+5+6+7+8+7+6+5+4+3+2+1}{8 \times 8 \times 8 \times 8} =$ _____

10. $\left(\frac{14}{35} \times 4.27 + 8.54 \times \frac{21}{30}\right) \div 4.27 \times 25\% =$ _____

$$11. \frac{4}{5 - \frac{5}{3 + \frac{6}{4 - \frac{7}{8}}}} = \underline{\hspace{2cm}}$$

$$12. 87 \times \left(\frac{1}{47} - \frac{1}{71} \right) + 16 \times \left(\frac{1}{71} + \frac{1}{97} \right) - 71 \times \left(\frac{1}{47} - \frac{1}{97} \right) = \underline{\hspace{2cm}}$$

$$13. 255 \div 255 \frac{255}{699} - 477 \div 477 \frac{477}{699} = \underline{\hspace{2cm}}$$

$$14. 5155 \times 5155 + 2730 \times 2730 - 2425 \times 2425 = \underline{\hspace{2cm}}$$

$$15. \left(1 - \frac{1}{3} \right) \times \left(1 - \frac{1}{5} \right) \times \left(1 - \frac{1}{7} \right) \times \left(1 - \frac{1}{9} \right) \times \left(1 - \frac{1}{11} \right) \times \left(1 + \frac{1}{2} \right) \times \left(1 + \frac{1}{4} \right) \times \left(1 + \frac{1}{6} \right) \times \left(1 + \frac{1}{8} \right) \\ \times \left(1 + \frac{1}{10} \right) = \underline{\hspace{2cm}}$$

$$16. 0.325 \times 0.465 + 0.535 \times 1.2 + 0.465 \times 0.675 = \underline{\hspace{2cm}}$$

$$17. \left(1 + \frac{19}{91} \times 12 \right) + \left(2 + \frac{19}{91} \times 11 \right) + \left(3 + \frac{19}{91} \times 10 \right) + \cdots + \left(12 + \frac{19}{91} \times 1 \right) = \underline{\hspace{2cm}}$$

$$18. \frac{11 \times 36 + 12 \times 37 + 13 \times 38 + 14 \times 39 + 15 \times 40}{11 \times 35 + 12 \times 36 + 13 \times 37 + 14 \times 38 + 15 \times 39} \\ + \frac{11 \times 34 + 12 \times 35 + 13 \times 36 + 14 \times 37 + 15 \times 38}{11 \times 35 + 12 \times 36 + 13 \times 37 + 14 \times 38 + 15 \times 39} = \underline{\hspace{2cm}}$$

$$19. \left(\frac{1}{2} + \frac{1}{3} + \frac{1}{4} + \cdots + \frac{1}{19} + \frac{1}{20} \right) + \left(\frac{2}{3} + \frac{2}{4} + \frac{2}{5} + \cdots + \frac{2}{20} \right) + \left(\frac{3}{4} + \frac{3}{5} + \frac{3}{6} + \cdots + \frac{3}{20} \right) \\ + \left(\frac{4}{5} + \frac{4}{6} + \frac{4}{7} + \cdots + \frac{4}{20} \right) + \cdots + \left(\frac{18}{19} + \frac{18}{20} \right) + \frac{19}{20} = \underline{\hspace{2cm}}$$

$$20. \frac{1}{3} + \frac{1}{3+6} + \frac{1}{3+6+9} + \cdots + \frac{1}{3+6+9+\cdots+90} = \underline{\hspace{2cm}}$$