

Class 2 Homework

Please find most efficient methods to complete following calculations:

1. $78 + 76 + 81 + 82 + 77 + 80 + 79 + 83 = (78 + 82) + (77 + 83) + (81 + 79) + (76 + 80) = (78 + 82) + (77 + 83) + (81 + 79) + (76 + 84 - 4) = 160 \times 4 - 4$
2. $998 + 1413 + 9989 = 1000 - 2 + 1400 + 13 + 10000 - 11$
3. $19 + 299 + 3999 + 49999 = 20 - 1 + 300 - 1 + 4000 - 1 + 50000 - 1$
4. $1456 - 299 = 1456 - 300 + 1$
5. $673 + (528 - 373) = (673 - 373) + 528$
6. $829 + 571 - 692 = (829 + 571) - 700 + 8$
7. $1164 \times 25 = (4 \times 25) \times 291$
8. $3600 - 785 + 534 - 215 = 3600 - 800 + 15 + 534 - 200 - 15$
9. $9 + 99 + 999 + 9999 + \dots + 999999999 = (10 - 1) + (100 - 1) + (1000 - 1) + (10000 - 1) + \dots + (1000000000 - 1)$
10. $53 \times 57 = 5 \times 600 + 3 \times 7$
11. $26 \times 86 =$
12. $548 - 164 - 236 = 548 - (164 + 236)$
13. $18 + 21 + 23 + 20 + 19 + 12 =$
14. $199999 + 19999 + 1999 + 199 + 19 =$
15. $2541 - 1998 =$
16. $1991 + 8119 + 8009 + 1881 =$
17. $25 \times 19 \times 64 \times 125 = 25 \times 19 \times 4 \times 8 \times 2 \times 125 = (25 \times 4) \times 19 \times 2 \times (8 \times 125)$
18. $125 \times 34 + 125 \times 66 = 125 \times 2 \times 17 + 125 \times 2 \times 33 = 125 \times 2 \times (17 + 33)$
19. $43 \times 11 + 43 \times 36 + 43 \times 52 + 43 = 43 \times (11 + 36 + 52 + 1)$
20. $68 \times 62 = 6 \times 700 + 8 \times 2$
21. $85 \times 85 =$

Multiple choice problems:

22. . What is the product of $\frac{3}{2} \times \frac{4}{3} \times \frac{5}{4} \times \dots \times \frac{2006}{2005}$?

- (A) 1 (B) 1002 (C) 1003 (D) 2005 (E) 2006

Answer (C)

23. 8. In the multiplication problem below A, B, C, D and are different digits. What is $A + B$?

$$\begin{array}{r}
 \\
 \\
 \times \\
 \hline
 C C
 \end{array}$$

- (A) 1 (B) 2 (C) 3 (D) 4 (E) 9

Answer: (A)