

ABEL MATHEMATICS CONTEST

GRADES 4 AND 5

MAY 2008

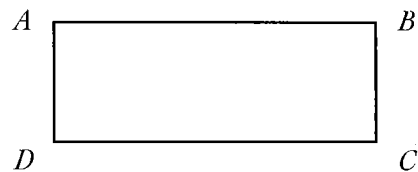



NIELS HENRIK ABEL

Instructions

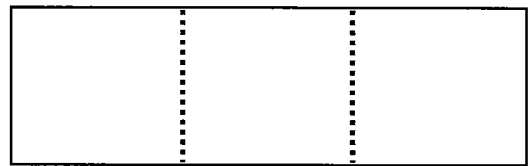
1. Calculators may be used.
2. Circle the correct answer.
3. Transfer your answer to the answer form in dark pencil.
4. The time limit for the test is one hour.

1. $1000 + 900 + 90 + 0 =$
 A. 2000 B. 1990 C. 199 D. 0
2. I have 1 penny, 5 nickels, and 10 dimes. How much money do I have?
 A. \$1.25 B. \$1.26 C. \$1.51 D. \$1.60
3. $5 + (5 \times 5) - (5 \div 5) =$
 A. 29 B. 25 C. 23 D. 9
4. As shown, $ABCD$ is a rectangle. Which of the following is a pair of parallel sides?



- A. AB, BC B. DA, AB C. AB, CD D. DC, BC
5. When 2008 is divided by 2006, the remainder is
 A. 1 B. 2 C. 2006 D. 2008
6. If 111 is divided by 4, the product of the quotient and the remainder is
 A. 1 B. 30 C. 81 D. 111
7. Find the missing number: $8 \times 8 = 16 \times \underline{\quad}$
 A. 16 B. 4 C. 2 D. 1
8. The perimeter of the rectangle shown in the diagram is 20. The width of the rectangle is 4. What is the length of this rectangle?

- A. 5 B. 6 C. 16 D. 24
9. What is the ones' digit in the product 987×789 ?
 A. 1 B. 3 C. 7 D. 9

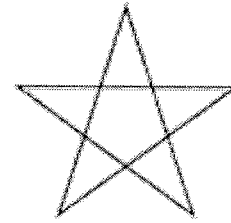
10. How many seconds are there in 60 minutes?
 A. 1 B. 60 C. 3000 D. 3600
11. When a certain whole number is divided by 5, the remainder is odd. The original whole number *could be*
 A. 41 B. 47 C. 54 D. 59
12. What is the one's digit of $111 \times 222 \times 333 \times 444 \times 555 \times 666 \times 777$?
 A. 0 B. 1 C. 4 D. 7
13. Five years ago my brother was 5 years younger than I was. If he is now 21 years old, how old will I be in 5 years?
 A. 16 B. 26 C. 31 D. 36
14. If $2 + 4 + 6 + \dots + 196 + 198 + 200 = 10100$, what is the value of $1 + 2 + 3 + \dots + 98 + 99 + 100$?
 A. 1000 B. 5000 C. 5050 D. 10000
15. How many whole numbers greater than 9 and less than 999 are divisible by 9?
 A. 108 B. 109 C. 110 D. 111
16. If the perimeter of each square is 8, what is the perimeter of the figure?



- A. 8 B. 16 C. 20 D. 24
17. A ? does not have two pairs of parallel sides.
 A. square B. rectangle C. trapezoid D. rhombus
18. The perimeter of the larger of two squares is 8 times the perimeter of the smaller. How many of the smaller squares would just fit into the larger square, without overlapping each other?
 A. 4 B. 8 C. 16 D. 64

19. $(333\ 333\ 333\ 333\ 333) \div 9 =$
 A. 37 373 737 B. 370 370 370 370 370 C. 37 037 037 037 037 D. 37 373 737 373 737

20. How many triangles are in the figure at the right?

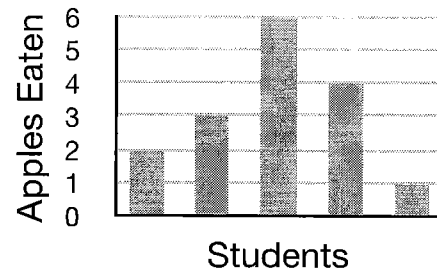


- A. 5 B. 9 C. 10 D. 15
21. A polygon *cannot* have ? sides.
 A. 2 B. 3 C. 7 D. 2008
22. If the pattern of the first 6 letters in **CIRCUSCIRCUS** . . . continues, then the pattern's 500th letter is
 A. **R** B. **U** C. **C** D. **I**

23. What is the probability of rolling an even number on the first roll of a fair, six-sided die?



- A. 3 B. $\frac{2}{3}$ C. $\frac{2}{6}$ D. $\frac{1}{2}$
24. Six students have an apple eating contest. The graph shows the number of apples eaten by each student. Kathy ate the most apples and Robbie ate the fewest. How many more apples did Kathy eat than Robbie?



- A. 2 B. 3 C. 5 D. 6
25. If 5 gizmos = 3 gremlins, then 45 gremlins = ? gizmos.
 A. 27 B. 30 C. 47 D. 75