

6th Grade

2013 Cindy D. Wright Mathematics Tournament presented by Pizitz Middle School

6th Grade Written Test

Directions:

1. Do not open this test until you are told to do so by the proctor.
2. 60 minutes will be allowed for completing this test. The proctor will keep time. Students must stay in the testing room for the full 60 minutes. Anyone leaving the testing room for an emergency must turn in their test and scantron answer sheet and not return.
3. Use a #2 lead pencil.
4. No calculators, books, notes, or other aides may be used. If your watch has a calculator, please remove your watch now. Cell phones must be turned off.
5. Scratch paper will be provided; you may not furnish your own. If you need more scratch paper during the test, raise your hand, and your proctor will bring it to you. You may write on your test.
6. You will receive four points for each correct answer and have one point deducted for each incorrect answer. An answer left blank will not change the score.
7. There are three tiebreakers at the end of the test. Write your name, your school name, grade, and tiebreakers answers in the top margin on the back of your scantron. If the tiebreakers do not break a tie, then the test will be scored backwards, with the first person to not answer a question correctly being given the lower place.
Please write your name, school, and TB1, TB2, and TB3 on the back of your scantron answer sheet now.
8. Please give your scantron answer sheet to the proctor before leaving the testing room. You may keep your copy of the test. Answer Keys will be posted in the corner areas on each floor and in the cafeteria.

Good Luck!

Cindy D. Wright Pizitz Mathematics Tournament 2013
Sixth Grade Written

1. Solve: $-3x + 25 = 91$
A. -22 B. 22 C. -24 D. 24 E. NOTA

2. Cindy is making a dessert that calls for $1\frac{2}{3}$ cups of crushed cookies. If she has already crushed $\frac{3}{4}$ cup, how much more does she need?
A. $\frac{5}{12}$ cup B. $\frac{7}{12}$ cup C. $\frac{11}{12}$ cup D. $2\frac{5}{12}$ cup E. NOTA

3. A salad bar contains 5 different toppings and 6 different dressings. How many ways could you serve a salad with 1 topping and 1 dressing?
A. 11 B. 22 C. 30 D. 32 E. NOTA

4. Allen has exactly \$1.00 of coins in his pocket. He has at least one penny, one nickel, one dime, and one quarter. He does not have any half-dollar coins. What is the least number of coins he could have?
A. 8 B. 11 C. 12 D. 15 E. NOT

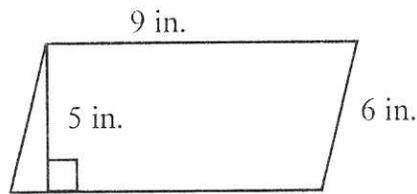
5. If $x = -5$, and $y =$ the reciprocal of 6, what is $\frac{x}{y}$?
A. -30 B. 30 C. $-\frac{1}{30}$ D. $\frac{5}{6}$ E. NOTA

6. Which of the following is the prime factorization of 196?
A. 14^2 B. $7 \cdot 28$ C. $4 \cdot 7^2$ D. $2 \cdot 2 \cdot 7 \cdot 7$ E. NOTA

7. Which of the following points would be in Quadrant III?
A. (1,3) B. (-1,4) C. (4,-3) D. (-4,-1) E. NOTA

8. Robert can work six math problems every fifteen minutes. Larry can work three math problems every five minutes. How many total problems can they work in $\frac{3}{4}$ hour?
A. 43 B. 45 C. 47 D. 48 E. NOTA

9. Find the area of the parallelogram given below.



- A. 54 in^2 B. 27 in^2 C. 30 in^2 D. 45 in^2 E. NOTA
10. Simplify: $36 - 4 \times 6 \div 3$
- A. 64 B. 36 C. 28 D. 4 E. NOTA
11. Mark has three 650-milliliter bottles of lemonade. Is one 2-liter bottle large enough to hold all of the lemonade from the three bottles?
- A. No, there would be 50 milliliters extra.
 B. Yes, the 2-liter bottle would hold the three 650-milliliter bottles exactly.
 C. Yes, there would be room for 50 more milliliters.
 D. No, there would be 0.05 milliliters extra.
 E. NOTA
12. The stem and leaf plot below shows the heights of a group of 7-year-olds. Find the median for their heights.

STEM	LEAF
3	7 8 9 9
4	3 4 5 6 7 8
5	3 4 5
	$4 3 = 43$

- A. 5 B. 39 C. 43.5 D. 45 E. NOTA
13. If $n = 7$, evaluate $\frac{(n+1)!}{(n-1)!}$.
- A. $\frac{4}{3}$ B. 48 C. 56 D. 64 E. NOTA

14. Given the input-output table below, what is the rule for the table?

Input	Output
3	12
5	18
7	24
9	30

- A. $x = 3y + 3$ B. $y = 3x + 3$ C. $y = 5x - 3$ D. $y = 6x - 6$ E. NOTA
15. Sara's math test scores for the nine weeks have been 97, 100, 84, 86, and 85. What does she need to make on the next test to have a mean of 91?
- A. 92 B. 94 C. 95 D. 96 E. NOTA
16. Simplify: $\frac{5}{8} \div \left(\frac{3}{8} + \frac{3}{7}\right)$
- A. $\frac{1}{6}$ B. $\frac{7}{9}$ C. $1\frac{9}{16}$ D. $2\frac{2}{21}$ E. NOTA
17. In a coastal region, there are 104 marked dolphins. In a sampling, biologists count 45 dolphins, of which 33 are marked. About how many dolphins are in the region?
- A. 104 B. 142 C. 182 D. 191 E. NOTA
18. A bag contains 6 red, 2 white, and 5 blue marbles. Find the probability of not obtaining a blue marble in a single draw.
- A. $\frac{8}{13}$ B. $\frac{5}{13}$ C. $\frac{5}{8}$ D. $\frac{8}{5}$ E. NOTA
19. Find the value of $3(x^2 - 1)^2$, when $x = 3$.
- A. 576 B. 48 C. 75 D. 192 E. NOTA
20. Calculate the minimum cost to wrap a package that is three feet by four feet by two feet, if the cost of the wrapping paper is \$0.12 per square foot?
- A. \$3.90 B. \$6.24 C. \$6.48 D. \$7.80 E. NOTA

21. The ratio of girls to boys in a sixth grade art class is 6:5. If there are 121 students in the class, how many are boys?
- A. 55 B. 57 C. 58 D. 66 E. NOTA
22. If the perimeter of a square is 56 inches, what is the area of the square?
- A. 196 in^2 B. 98 in^2 C. 58 in^2 D. 224 in^2 E. NOTA
23. Carl, Denise, Emma, and Julie worked at a school car wash. Carl washed three times as many cars as Denise. Denise washed four fewer cars than Emma, who washed six more cars than Julie. Julie washed 10 cars. How many cars were washed in all?
- A. 64 B. 68 C. 74 D. 78 E. NOTA
24. Find the simple interest earned on \$4,650 at $2\frac{1}{2}\%$ per year for 3 years.
- A. \$116.25 B. \$348.75 C. \$1,162.50 D. \$3,487.50 E. NOTA
25. If 60% of students participate in extracurricular activities and 320 students do not participate, how many students are involved in extracurricular activities?
- A. 800 B. 480 C. 448 D. 400 E. NOTA

Tiebreakers

Please write tiebreaker answers in the top margin on the back of the scantron.

- TB1. Sam added 23 stamps to his stamp collection. Three months later his collection had tripled in number to a total of 129 stamps. How many stamps did Sam have to start his collection?
- TB2. In a store, a \$90 item was marked down by 20% for a sale. After the sale, the item's sale price was marked up 20%. What was the final price?
- TB3. A trapezoid has angles that measure x° , x° , $4x^\circ$, and $4x^\circ$. Find the value of x .