



# 6<sup>th</sup> Grade

## 2015 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!***

**Pizitz Mathematics Tournament 2015**  
**Sixth Grade Written Test**

1. Jason bought  $\frac{3}{4}$  lb of cheese. He ate  $\frac{1}{6}$  lb of his cheese. What part of a pound did Jason have left?  
A.  $\frac{1}{8}$  lb                      B.  $\frac{2}{3}$  lb                      C.  $\frac{7}{12}$  lb                      D.  $\frac{5}{6}$  lb                      E. NOTA
  
2. Jupiter is the fifth planet from the sun at a distance of about 778 million kilometers. What is this distance in scientific notation?  
A.  $778 \times 10^6$                       B.  $7.78 \times 10^8$                       C.  $7.78 \times 10^5$                       D.  $778 \times 10^7$                       E. NOTA
  
3. Simplify:  $32 \div 8 \times 2 - 1$ .  
A. 1                      B. 4                      C. 16                      D. 7                      E. NOTA
  
4. Dr. Burgess is practicing for a 2500-meter run. He runs the distance twice a day for 5 days. How many kilometers did he run?  
A. 25 km                      B. 250 km                      C. 2500 km                      D. 25,000 km                      E. NOTA
  
5. What is two-sevenths of the sum of  $4\frac{1}{6}$  and  $2\frac{1}{4}$ ?  
A.  $\frac{1}{2}$                       B.  $1\frac{1}{12}$                       C.  $1\frac{5}{6}$                       D.  $1\frac{5}{12}$                       E. NOTA
  
6. Solve for  $x$ :  $7x - 3 = 39$   
A. -9                      B. -6                      C. 9                      D. 6                      E. NOTA
  
7. A giraffe in a zoo casts a shadow 63 feet long at the same time that an ostrich casts a shadow 21 feet long. If the ostrich is 7 feet tall, how tall is the giraffe?  
A. 21 ft.                      B. 28 ft.                      C. 42 ft.                      D. 56 ft.                      E. NOTA
  
8. Susie took a science test that had 40 questions. She answered 28 questions correctly. What percent of the questions did she answer correctly?  
A. 28%                      B. 60%                      C. 70%                      D. 72%                      E. NOTA
  
9. Which of these square numbers also happens to be the sum of two smaller square numbers?  
A. 16                      B. 25                      C. 36                      D. 49                      E. NOTA

10. A printer that normally costs \$125.00 is on sale for 20% off the regular price. If the tax rate is 9%, what is the total cost for the printer?
- A. \$92.65      B. \$109.00      C. \$111.25      D. \$114.45      E. NOTA
11. Mark pitched to 20 batters in a baseball game. He struck out 8 batters. What percent did he strike out?
- A. 20%      B. 28%      C. 40%      D. 45%      E. NOTA
12. Bill gave half of his marbles to his son. Bill gave half of what he had left to his grandson. Then, Bill gave half of what he had left to his great-grandson. He kept 5 marbles for himself. How many marbles did he have in the beginning?
- A. 40      B. 80      C. 100      D. 120      E. NOTA
13. An airplane traveled 1,500 miles in 2.5 hours. What was the unit rate for the trip?
- A. 100 mph      B. 250 mph      C. 500 mph      D. 600 mph      E. NOTA
14. Tim wants to buy a tire to match the tires he already has. The diameter of the tire is 24 inches. What is the circumference of the tire he needs? Use 3.14 for  $\pi$ .
- A. 75.36 in.      B. 452.16 in.      C. 37.68 in.      D. 150.72 in.      E. NOTA
15. A math team earned the following written test scores at a recent tournament: 87, 86, 82, 95. What is the positive difference between the median and mean scores?
- A. 79.5      B. 1.5      C. 3.5      D. 263.5      E. NOTA
16. Barry and Sue left the park at the same time. Barry traveled north at 45 miles per hour. Sue traveled east at 60 miles per hour. After one hour, how far apart are Barry and Sue?
- A. 60 miles      B. 75 miles      C. 90 miles      D. 105 miles      E. NOTA
17. Sue took a cab from the airport to her home. She gave the cab driver \$20, which included the fare and a \$2 tip. The cab company charges \$3 for the first mile and 75 cents for each additional half mile after that. How many miles is Sue's home from the airport?
- A. 10 miles      B. 11 miles      C. 20 miles      D. 21 miles      E. NOTA
18. Three numbers have ratio 1 : 2 : 3, and their sum is 48. What is the greatest of these three numbers?
- A. 21      B. 22      C. 23      D. 24      E. NOTA

19. What is the measure of the central angle that represents 10% of a circle graph?
- A.  $18^\circ$                       B.  $36^\circ$                       C.  $72^\circ$                       D.  $180^\circ$                       E. NOTA
20. If  $X \odot Y$  means  $3Y - 2X$ , find  $3 \odot (4 \odot 5)$ .
- A.  $-15$                       B.  $-5$                       C.  $5$                       D.  $15$                       E. NOTA
21. April has 30 days. Sam and Tom began playing baseball on April 1. Sam played every other day, and Tom played every fourth day. How many times in April did both boys play on the same day?
- A. 3 days                      B. 4 days                      C. 6 days                      D. 8 days                      E. NOTA
22. What is the binary number for the decimal number 5?
- A.  $101_2$                       B.  $110_2$                       C.  $111_2$                       D.  $1000_2$                       E. NOTA
23. At a hotdog stand, there are 3 toppings: mustard, relish, and onions. How many kinds of hotdogs can customers make with 0, 1, 2, or 3 different toppings?
- A. 2 kinds                      B. 5 kinds                      C. 8 kinds                      D. 12 kinds                      E. NOTA
24. Jerry is designing a cereal box. The height of the box is 12 inches, the width is 2 inches, and the length is 6 inches. What is the surface area of the cardboard he needs for one box?
- A.  $40 \text{ in}^2$                       B.  $144 \text{ in}^2$                       C.  $216 \text{ in}^2$                       D.  $288 \text{ in}^2$                       E. NOTA
25. Mary owns a cat named Oliver. She reached into her bag of 5 fish-flavored, 6 liver-flavored, 3 chicken-flavored, and 10 milk-flavored treats and gave two to Oliver without looking. What is the probability that Oliver got a liver treat and a chicken treat?
- A.  $\frac{3}{92}$                       B.  $\frac{3}{8}$                       C.  $\frac{1}{32}$                       D.  $\frac{1}{2}$                       E. NOTA

**Tiebreakers** *Please write the answer for each tiebreaker on the back of the scantron.*

TB1. Solve.  $-\frac{1}{5}x - 8 = 4x + 3$

TB2. Simplify.  $\frac{-25a^5b^6}{5a^5b^3}$

TB3. A group of 3 adults and 10 students paid \$102 for a cavern tour. Another group of 3 adults and 7 students paid \$84 for the tour. Find the admission price for an adult.