



23. Jake bought cheese slices to put on his daily sandwich. If he puts 6 cheese slices on each sandwich, then one day he will have 2 cheese slices left over. If he puts 5 cheese slices on each sandwich, then one day he will have 3 cheese slices left over. He could have started with ? cheese slices.

23.

- A) 13 B) 14 C) 26 D) 38

24. In Olive’s kingdom, castles have 8 beds and homes have 2 beds. If there are 48 beds and 3 castles, how many homes are there?

24.

- A) 12 B) 16 C) 24 D) 48



25. How many whole numbers greater than 100 and less than 1000 have all three digits different from one another?

25.

- A) 648 B) 720 C) 729 D) 900

26. Of the following intervals, which includes the most prime numbers?

26.

- A) 20 and 30 B) 30 and 40 C) 40 and 50 D) 50 and 60

27. Simona has only dimes and quarters, which total exactly one dollar. If she has at least one dime and at least one quarter, how many coins **must** she have all together?

27.

- A) 4 B) 7 C) 9 D) 10

28. Briana can solve 6 puzzle cubes in 4 minutes, and Avima can solve 5 puzzle cubes in 6 minutes. At these rates, Briana can solve one cube ? seconds more quickly than Avima can.

28.

- A) 24 B) 27 C) 30 D) 32



29. ? is the product of exactly 2 prime numbers.

29.

- A) 2018 B) 2020 C) 3018 D) 3020

30. At most how many 1-by-3 rectangles that do not overlap can fit in a 5-by-7 rectangle?

30.

- A) 9 B) 10 C) 11 D) 12

The end of the contest **4**

Sample 4th Grade Contest

Spring, 2019

Instructions

4

- **Time** Do *not* open this booklet until you are told by your teacher to begin. You will have only *30 minutes* working time for this contest. You might be *unable* to finish all 30 questions in the time allowed.
- **Scores** Please remember that *this is a contest, and not a test*—there is no “passing” or “failing” score. Few students score as high as 24 points (80% correct). Students with half that, 12 points, *should be commended!*
- **Format and Point Value** This is a multiple-choice contest. Each answer will be one of the *capital letters* A, B, C, or D. Write each answer in the *Answer Column* to the right of each question. We suggest (but do not require) that you use a pencil. Each question you answer correctly is worth 1 point. Unanswered questions receive no credit. You **may** use a calculator *unless* your school does *not* allow you to use one.

Please Print

Last Name _____ First Name _____

School _____ Teacher _____ Grade Level _____

Do Not Write In The Space Below

To the Teacher:

Please enter the student’s score at the right before you return this paper to the student.

Student’s Score: _____

The school’s top scorer will receive the book *Math Contests—Grades 4,5,6 (Vol. 4)*. Other high scorers will receive Certificates of Merit. In any one school year, no student may win both a book and a certificate. The book and certificates were in the original contest package.

If needed, duplicate book awards may be ordered as described below.

Twenty-one books of past contests, *Grades 4, 5, & 6 (Vols. 1, 2, 3, 4, 5, 6, 7)*, *Grades 7 & 8 (Vols. 1, 2, 3, 4, 5, 6, 7)*, and *High School (Vols. 1, 2, 3, 4, 5, 6, 7)*, are available, for \$12.95 per volume, from Math League Press, P.O. Box 17, Tenafly, NJ 07670-0017.

Visit our Web site at <http://www.mathleague.com>

Steven R. Conrad, Daniel Flegler, John Hagen, and Adam Raichel, contest authors

1. Which of the following sums and products is an odd number? A) 2018×2019 B) 2019×2020 C) $2018 + 2019$ D) $2019 + 2021$	1.
2. If Zach multiplied the whole number on his shirt by itself, which of the following could be his result? A) 24 B) 25 C) 26 D) 27	2.
3. What is the product of 49 ones? A) 1 B) 7 C) 49 D) 50	3.
4. 4 dozen socks = <u>?</u> pairs of socks A) 2 B) 24 C) 48 D) 96	4.
5. If the number of months in a year is divided by the number of days in a week, what is the remainder? A) 0 B) 2 C) 5 D) 7	5.
6. Henry the Hamster first danced on November 1, 2018. By April 1, 2019, for how many months had he been dancing? A) 5 B) 6 C) 7 D) 8	6.
7. $20 - 18 + 20 - 18 + 20 - 18 = ?$ A) 2 B) 4 C) 6 D) 8	7.
8. What is the ones digit in the product $12 \times 13 \times 14$? A) 2 B) 4 C) 6 D) 8	8.
9. Which of the following is greatest? A) $1 \times 2 \times 12$ B) $2 \times 3 \times 4$ C) $4 \times 2 \times 2$ D) $2 \times 4 \times 4$	9.
10. Sandra uses two entire erasers for every 15 questions she answers. If erasers come in packs of 12, at least how many packs does she need for her 100-question test? A) 2 B) 3 C) 4 D) 5	10.
11. The greatest whole-number multiple of 7 that is less than 100 is A) 91 B) 93 C) 97 D) 98	11.
12. The digit <u>?</u> appears only one time in the sum of 654 and 456. A) 0 B) 1 C) 2 D) 3	12.



13. Ella wears a sweater of a different color each day of the week—red for Sundays, blue for Mondays, etc. Each of her many sweaters is one of 7 different colors. She donates each sweater to charity after wearing it 4 times! The least number of sweaters Ella wears during December is A) 7 B) 8 C) 10 D) 12	13.
14. How many whole numbers greater than 10 and less than 200 can be written using only even digits? A) 16 B) 20 C) 25 D) 50	14.
15. Noah has a soccer game every day and scores two goals in every game. How many weeks will it take him to score 56 goals? A) 3 B) 4 C) 5 D) 18	15.
16. Chris ran each lap of his 10-lap race in 90 seconds. After running for 6 minutes, how many laps did Chris have left to run? A) 3 B) 4 C) 5 D) 6	16.
17. How many pairs of unequal whole numbers greater than 40 and less than 60 sum to 100? A) 9 B) 10 C) 18 D) 20	17.
18. $2 \times 4 \times 5 \times 25 = ?$ A) 6×125 B) 6×150 C) 8×150 D) 10×100	18.
19. The average of 3 numbers is a whole number. If one number is 2, and the other 2 numbers are equal, the other numbers could each be A) 3 B) 4 C) 5 D) 6	19.
20. $\$2000 - 200\text{¢} + \$20 - 2\text{¢} =$ A) $\$1999.98$ B) $\$2017.80$ C) $\$2017.98$ D) $\$2020.20$	20.
21. Joey has only large and small boxes. In each large box there are exactly four small boxes. If Joey has 20 boxes total, the lowest possible number of small boxes that Joey has is A) 4 B) 5 C) 15 D) 16	21.
22. How many whole numbers between 100 and 200 are divisible by both 4 and 6? A) 6 B) 7 C) 8 D) 10	22.

