

26. If Marlon the mailman had sunny weather on exactly 12 of 30 days last month, on what percent of days was the weather *not* sunny?

- A) 36% B) 40% C) 60% D) 64%

27. Last month I spent \$24 on magnets that cost 80¢ each, and this month I spent \$24 on magnets that cost \$1.20 each. The average cost per magnet was

- A) \$0.92 B) \$0.96 C) \$1.00 D) \$1.04

28. On a number line,  $\frac{?}{?}$  is the same distance from 1.75 as it is from 7.25.

- A) 2.75 B) 3.25 C) 3.75 D) 4.5

29.  $2^3 \times 3^4 \times 4^5 \times 6^7 \times 9^{10} =$

- A)  $2^{15} \times 3^{21}$  B)  $2^{20} \times 3^{31}$  C)  $2^{15} \times 3^{40}$  D)  $2^{105} \times 3^{280}$

30. In a garage, the ratio of red cars to black cars is 8:5, and the ratio of black cars to white cars is 3:4. The minimum number of cars in the garage is

- A) 20 B) 59 C) 74 D) 91

31. The sum of 6 consecutive integers, the largest of which is 30, is equal to the sum of 10 consecutive integers, the largest of which is

- A) 17 B) 18 C) 21 D) 26

32. If a radius of a circle whose area is  $36\pi \text{ cm}^2$  equals the width of a rectangle, and the diameter of the circle is half the length of the rectangle, then the perimeter of the rectangle is

- A) 60 cm B) 90 cm C) 144 cm D) 172 cm

33. I wrote a list of consecutive positive integers beginning with 1. I then removed all multiples of 4, and I had 2345 integers left. What was the largest integer on my list after the numbers were removed?

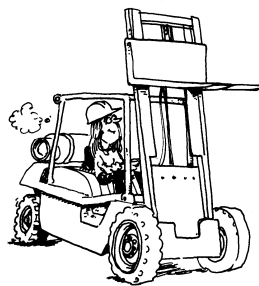
- A) 3126 B) 3127 C) 3129 D) 3130

34. At the start of my temporary job, I needed to load an average of 120 boxes a day in order to finish my job on time. At first I loaded 90 boxes a day. I then had 6 days left to load the remaining 1200 boxes. How many days did I have in all for this temporary job?

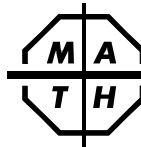
- A) 10 B) 16 C) 22 D) 26

35. Each day last week I counted 50% more leaves than I had counted the day before. If I counted 2430 leaves last Friday, how many had I counted the Sunday before that Friday?

- A) 160 B) 240 C) 280 D) 320



The end of the contest **6**



## Sample 6th Grade Contest

Tuesday, February 26 (alternate date: February 19), 2013

# 6

### Instructions

- **Time** Do *not* open this booklet until told by your teacher to begin. You might be *unable* to finish all 35 questions in the 30 minutes allowed.
- **Scores** Remember that *this is a contest, not a test*—there is no “passing” or “failing” score. Few students score 28 points (80% correct). Students with 14 points, *should be commended!* High-scoring students may be invited to our “Math Camp,” held last August at Stanford University.
- **Results Posted Online** Scores of high-scoring schools, both regional and overall, will be posted at [www.mathleague.com](http://www.mathleague.com) no later than April 15.
- **Format, Point Value, & Eligibility** Every answer is an A, B, C, or D. Write answers in the *Answers* column. A correct answer is worth 1 point. Unanswered questions get no credit. You **may** use a calculator. You’re eligible for this contest only if you are in grade 6 or below and only if you don’t also take this year’s Annual 7th or Annual 8th Grade Contest.

### Please Print (To the student: You must complete all items below)

Last Name \_\_\_\_\_ First Name \_\_\_\_\_

School \_\_\_\_\_ Teacher \_\_\_\_\_ Grade Level \_\_\_\_\_

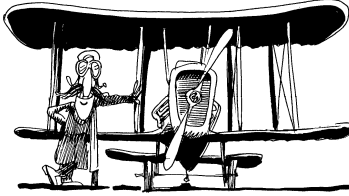

Time at Start of Contest \_\_\_\_\_ Today’s Date \_\_\_\_\_



### Do Not Write In The Space Below

#### To the Teacher:

Please enter the score at the right before you return this paper to the student. *Papers with scores of 30 or higher must be held until June 1.* Student’s Score: \_\_\_\_\_

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

1. Pete the pilot flew 28 times last month. If 21 of his flights were at night, how many of his flights were not at night? A) 7    B) 21    C) 28    D) 49		1.
2. The sum $12 + 34 + 56$ equals each of the following <i>except</i> A) $46 + 56$ B) $12 + 90$ C) $34 + 68$ D) $46 + 68$		2.
3. If I double the number of pens in my backpack and add 5, I get 23. How many pens do I have in my backpack? A) 9    B) 14    C) 36    D) 56		3.
4. $65 - (43 + 21) = (65 - 43) - \underline{\quad?}$ A) 1    B) 12    C) 21    D) 34		4.
5. The dime and quarter in my hand combined with the coins in my pocket total one dime less than \$1. In my pocket is A) 45¢    B) 55¢    C) 65¢    D) 75¢		5.
6. Wednesday is five days after my party. On what day is my party? A) Friday    B) Sunday    C) Monday    D) Tuesday		6.
7. Which of the following is the sum of two prime numbers? A) 11    B) 17    C) 23    D) 31		7.
8. Each of my shoes weighs the same. If 2 of my shoes weigh 12 kg together, then the total weight of 12 of my shoes is A) 2 kg    B) 24 kg    C) 36 kg    D) 72 kg		8.
9. $25 \times 25 = 5 \times 5 \times \underline{\quad?}$ A) 2    B) 5    C) 10    D) 25		9.
10. (Six dozen) + (one dozen pairs) = $\underline{\quad?}$ sets of three A) 48    B) 32    C) 24    D) 12		10.
11. When Giggles the Clown correctly counts the dots on his costume in groups of 4, there are 3 left over. There could be $\underline{\quad?}$ dots all together. A) 31    B) 32    C) 33    D) 34		11.
12. What time is 420 minutes before 4 P.M.? A) 4:00 A.M.    B) 7:00 A.M. C) 9:00 A.M.    D) 11:40 A.M.		12.
13. 10 hundreds + 10 tens + 10 ones = A) 111    B) 1101    C) 1110    D) 101010		13.

14. Professor Quack had 7 more students this year than he had last year. If he had a total of 43 students in both years combined, how many students did he have this year? A) 18    B) 25    C) 32    D) 36		14.
15. All together, 27 trapezoids have the same number of sides as $\underline{\quad?}$ triangles. A) 16    B) 18    C) 27    D) 36		15.
16. In my garden, I have 6 roses for every 5 daisies, and those are the only flowers I have. If I have 66 flowers, how many of them are roses? A) 11    B) 22    C) 30    D) 36		16.
17. The sum of two different odd numbers and an even number could be A) 52    B) 61    C) 65    D) 77		17.
18. On a Sunday I put two rabbits in a cage. If the number of rabbits in the cage doubled every day, on what day did the cage first have more than 100 rabbits in it? A) Thursday    B) Friday    C) Saturday    D) Sunday		18.
19. A pomegranate costs 4 times as much as a pawpaw. If one pomegranate costs 50¢ more than 2 pawpaws, then the pomegranate costs A) 50¢    B) 75¢    C) \$1    D) \$1.50		19.
20. If I triple $\underline{\quad?}$ and divide the result by 6, the quotient is 18. A) 9    B) 36    C) 72    D) 108		20.
21. $11 + 12 + 13 + 14 + 15 + 16 = 11 + 22 + 33 + 44 + 55 + 66 - \underline{\quad?}$ A) 50    B) 100    C) 150    D) 200		21.
22. If Bob jumps 15 additional times, the total number of his jumps will be 3 times what it was 3 jumps ago. Bob has jumped $\underline{\quad?}$ times all together. A) 12    B) 18    C) 21    D) 24		22.
23. The total value of 10 nickels and 9 dimes equals the total value of 5 quarters and $\underline{\quad?}$ pennies. A) 4    B) 5    C) 14    D) 15		23.
24. How many numbers between 1 and 100 are equal to 5 times an odd number? A) 9    B) 10    C) 11    D) 19		24.
25. The sum of the remainders of $123 \div 4$ , $234 \div 5$ , and $345 \div 2$ is A) 3    B) 6    C) 8    D) 12		25.