
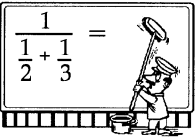





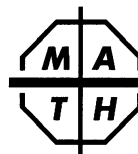


1. $11111 = 10101 + ?$ A) 101 B) 110 C) 1010 D) 110	1.
2. The reciprocal of a negative number is always A) negative B) positive C) prime D) 1	2.
3. $3 \times (\frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5} + \frac{1}{5}) =$ A) 0.6 B) 0.12 C) 3 D) 15	3.
4. If a square's side-length is an integer, the square's area cannot be A) even B) odd C) prime D) 1	4.
5. $(1995 - 1994) \times (1994 - 1995) =$ A) -1 B) 1 C) -3990 D) 3990	5.
6. $(1000 \times 0.01) + (100 \times 0.001) + (10 \times 0.0001) =$ A) 1.0101 B) 10.101 C) 11.1 D) 1.11	6.
7. What month will it be 1000 days after February 14? A) October B) November C) December D) January 	7.
8. One-half of 1 thousandth = A) 0.5 B) 0.05 C) 0.005 D) 0.0005	8.
9. Of the following, which is nearest in value to 0.25? A) $\frac{3}{8}$ B) $\frac{5}{16}$ C) $\frac{9}{32}$ D) $\frac{17}{64}$	9.
10.  $\frac{1}{\frac{1}{2} + \frac{1}{3}} =$ A) $\frac{6}{5}$ B) $\frac{5}{6}$ C) 6 D) 5	10.
11. If the measure of one angle of an isosceles triangle is 20° , then no angle of this triangle can have a degree-measure of A) 20° B) 40° C) 80° D) 140°	11.
12. $(10 \div 2) + (20 \div 4) + (40 \div 8) = 60 \div ?$ A) 15 B) 12 C) 5 D) 4	12.
13. Jane has 3 times as many books as Sue and half as many as Bob. If Bob has 12 books, how many books does Sue have? A) 2 B) 6 C) 8 D) 18 	13.
14. $(2 + 9)^2 = 2^2 + 9^2 + ?$ A) 0^2 B) 6^2 C) 7^2 D) 11^2	14.
15. $\frac{11+22}{22+44} = \frac{11}{22} + ?$ A) 0 B) $\frac{22}{44}$ C) $\frac{11}{44}$ D) 1	15.

16. If I first increase five by one hundredth, and next I subtract one thousandth from the resulting sum, then I will get A) 4.999 B) 4.099 C) 5.099 D) 5.009	16.
17. $1+1 \times 1+1 \times 2 \times 1+1 \times 1+1 =$ A) 6 B) 8 C) 16 D) 32	17.
18. If 40ℓ of maple sap are needed to make 1ℓ of maple syrup, what percent of the original volume of sap is the 1ℓ of maple syrup? A) 0.025 B) 2.5 C) 25 D) 39	18.
19. $100 \times (70 \times 50) =$ A) 7000×5000 B) 700×5000 C) 700×500 D) 7000×500	19.
20. Of 30 students, two-tenths got A's. How many got A's? A) 5 B) 6 C) 10 D) 20	20.
21. The value of 25 pennies + 50 nickels + 100 dimes is the same as the value of ? quarters. 	21.
22. Each side of a triangle has a different positive integer as its length. What is the least possible perimeter of this triangle? A) 3 B) 6 C) 9 D) 12	22.
23. 10% is ?% of 50%. A) 0.2 B) 5 C) 10 D) 20	23.
24. The product of a positive number and its reciprocal is always A) prime B) even C) 0 D) 1	24.
25. If $AD = 10$, $\overline{AD} \parallel \overline{BC}$, and the distance from \overline{AD} to \overline{BC} is 4, what is the total area of the 4 shaded triangles? A) 5 B) 10 C) 20 D) 40 	25.
26. The average of 6 numbers is 7. When a 7th number is added, the average of all 7 numbers is 0. The 7th number is A) -42 B) -7 C) -6 D) 0	26.
27. What is the product of $(-\frac{1}{7})^{50}$ and 7^{100} ? A) 50×7 B) 7^2 C) 50×7^2 D) $(-7)^{50}$	27.
28. The number 88 is what fractional part of 888? A) $\frac{1}{8}$ B) $\frac{1}{11}$ C) $\frac{11}{111}$ D) $\frac{1}{800}$ 	28.

29. How many positive integers are factors of 30? A) 6 B) 7 C) 8 D) 9	29.
30. $2^4 + 4^2 + 2^4 + 4^2 =$ A) 8^2 B) 8^{12} C) 12^{12} D) 12^{64}	30.
31. $17\% = 5\% \times ?$ A) $\frac{5}{17}$ B) $\frac{5}{17}\%$ C) $\frac{17}{5}$ D) $\frac{17}{5}\%$	31.
32. 1 hour and 31 minutes before 2 hours and 59 minutes after 1:41 P.M. is A) 3:09 P.M. B) 3:19 P.M. C) 12:12 P.M. D) 2:09 P.M.	32.
33. How many integers are their own additive inverses? A) none B) one C) two D) three	33.
34. As shown, a vertex of a square with sides of length 2, and the center of a circle with a radius of 2, coincide. What is the area of the shaded region? A) $4\pi - 4$ B) $2\pi + 4$ C) $3\pi - 4$ D) π	34.
35. If $0.5 < x \leq 1$ and $1 < y \leq 2$, it is <i>not</i> possible that $xy =$ A) 2 B) 1.5 C) 1 D) 0.5	35.
36. Of the following, which is closest to $\sqrt{999999999999999999}$? A) 999 999 999 B) 99 999 999 C) 9 999 999 D) 999 999	36.
37. What is the average of the first 1995 positive integers? A) 997.5 B) 998 C) 998.5 D) 999	37.
38. How far can John's dog go, when it runs at D m/sec, in the same time it takes John to go x m, when he runs at J m/sec? A) $\frac{Dx}{J}$ m B) $\frac{Jx}{D}$ m C) $\frac{DJ}{x}$ m D) $\frac{D}{xJ}$ m	38.
39. The sum of the squares of the lengths of the three sides of a right triangle is 800. The length of the hypotenuse is A) $\sqrt{800}$ B) $\frac{1}{2}\sqrt{800}$ C) 25 D) 20	39.
40. What is the quotient of the least common multiple of the first 40 positive integers divided by the least common multiple of the first 30 positive integers? A) 1147 B) 2294 C) 36 704 D) 89 466	40.

The end of the contest  **8**



1994-95 Annual 8th Grade Contest

Tuesday, February 7, 1995

8

Instructions

- **Time** You will have only 30 minutes working time for this contest. You might be *unable* to finish all 40 questions in the time allowed.
- **Scores** Please remember that *this is a contest, not a test*—and there is no “passing” or “failing” score. Few students score as high as 30 points (75% correct). Students with half that, 15 points, *should be commended!*
- **Format and Point Value** This is a multiple-choice contest. Each answer is an A, B, C, or D. Write each answer in the *Answers* column to the right of each question. A correct answer is worth 1 point. Unanswered questions get no credit. You **may** use a calculator.
- **About Math League Contests** Each year the Math League sponsors math contests for grades 4, 5, 6, 7, 8, Algebra Course 1, and High School. Twelve books of past contests, *Grades 4, 5, & 6 (Volumes 1, 2, 3, & 4)*, *Grades 7 & 8 (Volumes 1, 2, 3, & 4)* and *High School, (Volumes 1, 2, 3, & 4)* are available, for \$12.95 each volume (\$19.95 Canadian), from Math League Press, P.O. Box 17, Tenafly, N.J. 07670-0017. Visit us on the web at <http://www.MathLeague.com/> or call (201) 568-6328 for more information on our books, software, and math contests.

