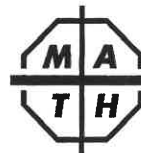


30. Two different diameters of the same circle <i>cannot</i> A) be perpendicular      B) be parallel C) be equal in length      D) have a point in common	30.
31. $999^2 = \sqrt{999} \times \sqrt{?}$ A) 999    B) $999^2$ C) $999^3$ D) $999^4$	31.
32. At the seashore, when I put a large shell to my ear, I heard the largest 3-digit prime. In that prime, the only <i>digit</i> that's prime is A) 1    B) 3    C) 5    D) 7	32.
33. The tens' digit of the product $5^{2005} \times 2005^5$ is A) 0    B) 2    C) 4    D) 5	33.
34. Of the whole-number multiples of 36 that are both more than 36 and less than $36^2$ , how many are squares of whole numbers? A) 0                      B) 4                      C) 9                      D) 16	34.
35. $\frac{5}{3} \div \frac{3}{5} = \frac{3}{5} \times ?$ A) $\frac{2}{5}$ B) $\frac{5}{3}$ C) $\frac{50}{18}$ D) $\frac{125}{27}$	35.
36. (the product of all the factors of 100) $\div$ (100) = A) 1                      B) 100                      C) $100^4$ D) $10^7$	36.
37. If $a\Delta b\Delta c = a \times c + b \times c$ , then $7\Delta 8\Delta 9 =$ A) 128                      B) 135                      C) 272                      D) 639	37.
38. $1 + \frac{2}{3 + \frac{4}{5}} =$ A) $1\frac{10}{19}$ B) $1\frac{10}{12}$ C) $2\frac{3}{7}$ D) $8\frac{2}{5}$	38.
39. Speedy Rabbit ran once around an 800 m track in 5 minutes. If Speedy had increased his average speed by $?$ , he would have finished in 20% less time. A) 20%    B) 25%    C) 30%    D) 40%	39.
40. Fifty rabbits began a 30-minute race. Whenever 2 dropped out, 1 joined in haste. If 2 dropped out 13 times, tell me then, how many rabbits were in the race at the end? A) 20                      B) 24                      C) 37                      D) 39	40.



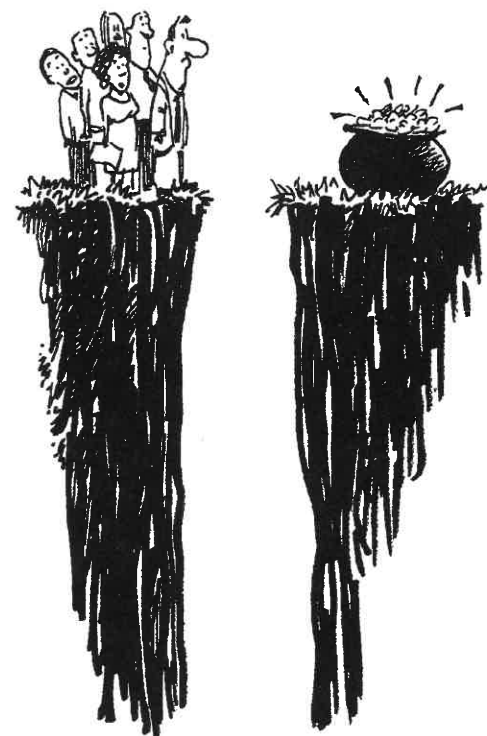
## 2005-2006 Annual 7th Grade Contest

February 21 or 28, 2006

## Instructions

7

- **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.



The end of the contest 7

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

Solutions on Page 89 • Answers on Page 142

1.	$24242 + 42424 = 22222 \times ?$	A) 2 B) 3 C) 4 D) 6
2.	A pot of gold, just out of reach, weighs as many kg as the number of days it takes to go backwards from any Feb. 1 to the previous Mar. 1. That pot of gold weighs $\frac{?}{2}$ kg. A) 335 B) 336 C) 337 D) 338	
3.	Consecutive odd numbers differ by	A) 0 B) 1 C) 2 D) 3
4.	$(18+19+20+21+22) \div 5 =$	A) 19 B) 20 C) 20.5 D) 21
5.	$64 \div 8 \times 4 \times 2 =$	A) 1 B) 4 C) 16 D) 64
6.	$10 \times 500 \text{ cm} = 5 \times \frac{?}{2} \text{ m}$	A) 5000 B) 1000 C) 100 D) 10
7.	If twice my age in months is 120, then my age in years is	A) 5 B) 10 C) 12 D) 60
8.	A square with even side-lengths <i>cannot</i> have a perimeter of	A) 12 B) 16 C) 24 D) 32
9.	The sum $100+99+98$ exceeds the sum $99+98+97$ by	A) 1 B) 3 C) 4 D) 97
10.	It takes $\frac{?}{2}$ 8-slice pizzas to give 64 people 2 slices each.	A) 32 B) 16 C) 8 D) 4
11.	$3^2 - 2^2 - 1^2 =$	A) 0 B) 1 C) 3 D) 4
12.	If 1 Red River beaver eats as much as 6 White River beavers, and 3 White River beavers eat as much as 4 Green River beavers, then 5 Red River beavers eat as much as $\frac{?}{2}$ Green River beavers.	A) 20 B) 30 C) 40 D) 60
13.	Of the following, which has the greatest value?	A) $1 \times 10^2$ B) $8 \times 10^1$ C) $10 \times 8^1$ D) $18 \times 10^1$
14.	1 tenth - 1 hundredth =	A) 9.90 B) 0.99 C) 0.90 D) 0.09
15.	6 halves = $\frac{?}{2}$ thirds	A) 3 B) 4 C) 9 D) 12



16.	In the quotient $(20 \times 16 \times 12 \times 8) \div (5 \times 4 \times 3 \times 2)$ , the remainder is	A) 0 B) 1 C) 2 D) 4
17.	What is the largest odd factor of $6^4$ ?	A) 3 B) $3^3$ C) $9^2$ D) $9^4$
18.	Two points that lie on a circle of radius 2 <i>cannot</i> be $\frac{?}{2}$ unit(s) apart.	A) 1 B) 2 C) 4 D) $4\pi$
19.	The quotient $\frac{1}{3} \div \frac{2}{4}$ equals the quotient $2 \div \frac{?}{2}$ .	A) $\frac{4}{3}$ B) $\frac{3}{4}$ C) 3 D) 4
20.	The number of nickels in \$40 is 4 times the number of dimes in	A) \$10 B) \$20 C) \$80 D) \$160
21.	Which number is $\frac{5}{1}$ of the reciprocal of $(\frac{2}{1} + \frac{3}{1})$ ?	A) $\frac{25}{6}$ B) $\frac{5}{6}$ C) $\frac{1}{6}$ D) 1
22.	If $\frac{3}{1}$ of my pockets are empty, and $\frac{3}{1}$ of those have a hole, what fraction of my pockets should <i>not</i> be classified as empty pockets with a hole?	A) $\frac{3}{1}$ B) $\frac{9}{5}$ C) $\frac{3}{2}$ D) $\frac{9}{8}$
23.	1% of 1 = 10% of $\frac{?}{2}$	A) 10 B) 1 C) 0.10 D) 0.01
24.	What is the product of 15 consecutive integers whose average is 7?	A) 0 B) 7 C) 105 D) 5040
25.	$\sqrt{36+64} = \sqrt{4} \times \sqrt{?}$	A) 16 B) 25 C) 36 D) 49
26.	In a triangle whose sides all have integer lengths and whose perimeter is 24, the length of the longest side is <i>at most</i>	A) 11 B) 13 C) 16 D) 22
27.	$21+42+63+84+105+126 = 21 \times ?$	A) 6 B) 7 C) 21 D) 42
28.	If a dirt truck carries 20 loads every day, then what percent of a 350-load job does this truck carry in 7 days?	A) 42% B) 40% C) 30% D) 6%
29.	$\frac{1+2+3}{2+4+6} + \frac{1+2+3}{4+8+12} =$	A) 2 B) $\frac{3}{8}$ C) 4 D) $\frac{2}{9}$

