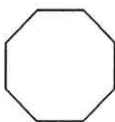
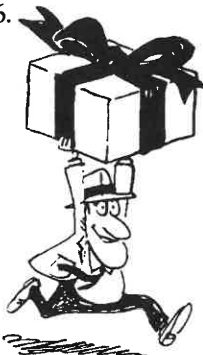


<p>30. A circle <i>cannot</i> pass through exactly <u>?</u> of a square's vertices. A) 4      B) 3      C) 2      D) 1</p>	<p>30.</p>
<p>31. Of the inequalities below, only <u>?</u> is correct. A) <math>\frac{7}{8} &lt; \frac{8}{17} &lt; \frac{6}{11}</math>    B) <math>\frac{6}{11} &lt; \frac{8}{17} &lt; \frac{7}{8}</math>    C) <math>\frac{6}{11} &lt; \frac{7}{8} &lt; \frac{8}{17}</math>    D) <math>\frac{8}{17} &lt; \frac{6}{11} &lt; \frac{7}{8}</math></p>	<p>31.</p>
<p>32. The volume of a cube with a surface area of 9600 is <u>?</u> times the volume of a cube with a surface area of 96. A) 10    B) 100    C) 1000    D) 10 000</p>	<p>32.</p>
<p>33. To buy a \$45 gift, I paid 25% right away, and I paid the rest in 5 equal payments of A) \$6.75    B) \$7.25    C) \$9.00    D) \$11.25</p>	<p>33.</p>
<p>34. If <math>N</math> is a prime, which of the following is <i>never</i> a prime? A) <math>N+3</math>      B) <math>N+5</math> C) <math>N+7</math>      D) <math>N+9</math></p>	<p>34.</p>
<p>35. The value of <math>2 \times \frac{1}{3} \times 4 \times \frac{1}{5} \times 6 \times \frac{1}{7} \times \dots \times 48 \times \frac{1}{49}</math> is A) <math>&lt; 1</math>    B) <math>&gt; 1</math>    C) <math>= 1</math>    D) <math>= 0</math></p>	<p>35.</p>
<p>36. Of 400 kids at my school, 30% have a cat and 75% have a dog. Of the kids with a cat, 65 also have a dog. How many of the 400 kids have neither a cat nor a dog? A) 45    B) 98    C) 129    D) 335</p>	<p>36.</p>
<p>37. <math>8^8 \times 4^4 \times 2^2 =</math> A) <math>2^{64}</math>    B) <math>2^{34}</math>    C) <math>2^{26}</math>    D) <math>2^{14}</math></p>	<p>37.</p>
<p>38. <math>\sqrt{\sqrt{100 \times 100 \times 100 \times 100}} =</math> A) 1      B) <math>\sqrt{10}</math>      C) 10      D) 100</p>	<p>38.</p>
<p>39. The sides of a regular octagon are numbered clockwise from 1 through 8. After the octagon is rotated <math>1575^\circ</math> clockwise, which side is in the position that side 3 occupied before the rotation? A) side 2    B) side 4    C) side 6    D) side 8</p>	<p>39.</p>
<p>40. If I swam 1 more lap each day than I swam the day before, and I averaged 58 laps daily last May, then I swam <u>?</u> laps last May 1. A) 42      B) 43      C) 44      D) 45</p>	<p>40.</p>



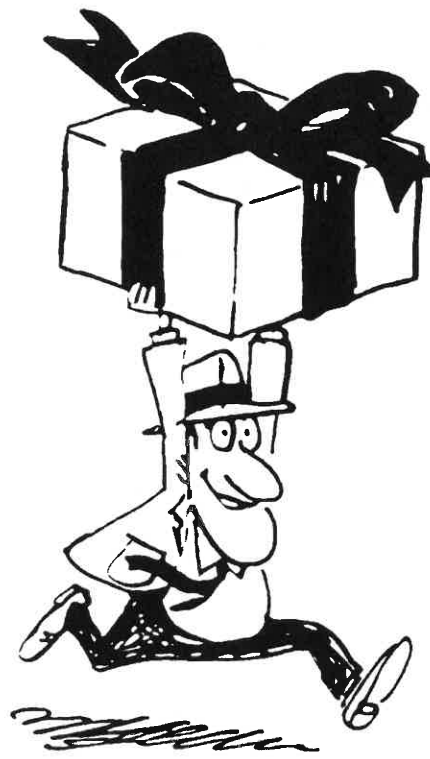
2007-2008 Annual 7th Grade Contest

Tuesday, February 19 or 26, 2008

7

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.





The end of the contest 7

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

Solutions on Page 77 • Answers on Page 139

1.	10 × 2008 + 2008 =	A) 4026 B) 10 × 2009 C) 10 × 4016 D) 11 × 2008
2.	At the annual car wash, a customer left 3 coins as a tip. The total value of this tip <i>cannot</i> be $\frac{2}{4}$ .	A) 30 B) 40 C) 50 D) 60
3.	The least common multiple of the numbers 2, 4, and 8 is	A) 2 B) 8 C) 14 D) 64
4.	10 hundredths + 10 hundredths =	A) 0.200 B) 0.020 C) 0.110 D) 0.100
5.	The product of two integers is 35. If each > 1, their sum is	A) 8 B) 12 C) 18 D) 36
6.	Of the following, which has the greatest value?	A) $0.1 \times 1.1 \times 1$ B) $0.1 + 1.1 \times 1$ C) $1.1 + 0.1 \times 1$ D) $0.1 + 1.1 + 1$
7.	I can cut at most $\frac{2}{3}$ pieces $1\frac{3}{4}$ cm long from a string 20 cm long.	A) 15 B) 16 C) 18 D) 25
8.	What is the sum of my three test grades, if their average is 90?	A) 270 B) 180 C) 90 D) 30
9.	We held our Splash Down Party at a pool in the shape of a square with area 36 m <sup>2</sup> . What is the perimeter of this pool?	A) 18 m B) 24 m C) 36 m D) 81 m
10.	 Al is 5 km from Bob. Dan is 4 km from Bob. The distance between Al and Dan is <i>at least</i>	A) 1 km B) 2 km C) 3 km D) 4 km
11.	The ratio of hours in a day to days in an hour is	A) 1:24 B) 24:1 C) 48:1 D) 576:1
12.	Of the following, the one with the largest prime factor is	A) 49 B) 51 C) 58 D) 65
13.	$\frac{2}{1}$ of $\frac{3}{1} = \frac{3}{1}$ of $\frac{3}{1}$	A) $\frac{6}{1}$ B) $\frac{4}{1}$ C) $\frac{3}{1}$ D) $\frac{2}{1}$
14.	The product of $\frac{2}{2}$ and its square is 64.	A) 2 B) 4 C) 6 D) 8
15.	How many integers are between $\frac{6}{10}$ and $\frac{6}{100}$ ?	A) 8 B) 9 C) 10 D) 90

16.	$\sqrt{9} + \sqrt{16} = \sqrt{25} + \frac{2}{2}$	A) $\sqrt{0}$ B) $\sqrt{2}$ C) $\sqrt{4}$ D) $\sqrt{49}$
17.	How many of the numbers 0.1, 0.9, 1.0, 1.9 exceed their reciprocals?	A) 1 B) 2 C) 3 D) 4
18.	If my canned food drive ended at 4:18 PM, and was half over at 3:26 PM, then it began at $\frac{2}{3}$ PM. 	A) 2:18 B) 2:32 C) 2:34 D) 2:44
19.	The numbers $\frac{2}{2}$ <i>cannot</i> be lengths of a triangle's sides.	A) 4, 5, 6 B) 3, 4, 5 C) 2, 3, 4 D) 1, 2, 3
20.	$\frac{31}{16} + \frac{16}{32} + \frac{16}{33} = \frac{8}{2}$	A) 48 B) 36 C) 16 D) 12
21.	The number $\frac{54}{36}$ is <i>not</i> reducible to a fraction whose denominator is	A) 6 B) 8 C) 12 D) 15
22.	The sum of 2 consecutive whole numbers <i>cannot</i> be	A) 1 B) prime C) odd D) even
23.	Which number below doubles when I increase its numerator by 12?	A) $\frac{41}{3}$ B) $\frac{41}{6}$ C) $\frac{41}{12}$ D) $\frac{41}{24}$
24.	The measures of 2 angles in an isosceles triangle could be	A) 85°, 50° B) 80°, 55° C) 75°, 35° D) 70°, 40°
25.	10% of 10% = 100% of $\frac{2}{2}$	A) 1 B) $\frac{10}{1}$ C) $\frac{100}{1}$ D) $\frac{1000}{1}$
26.	When fully expanded, 10 <sup>2008</sup> has $\frac{2}{2}$ digits.	A) 2009 B) 2008 C) 2007 D) 20 080
27.	Ann is 2 cm taller than Bob, who is 2 cm taller than Carl. If the average height of all three is $\frac{150}{2}$ cm tall.	 A) 152 B) 148 C) 147 D) 146
28.	$\frac{1+2+3+4+5}{2+4+6+8+10} = \frac{6+7}{?}$	A) 12 B) 14 C) 26 D) 27
29.	(least perfect square > 2008) – (greatest perfect square < 2008) =	A) 88 B) 89 C) 90 D) 91