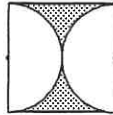
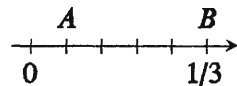


29. The product of two consecutive integers is always A) even B) odd C) positive D) divisible by 6	29.
30. To the nearest 1%, the circumference of a circle with diameter 2 is <u>?</u> % of the perimeter of a square with side-length 2. A) 75% B) 76% C) 78% D) 79%	30.
31. I read a 300-page book in 4.5 hours. If I took at least 30 seconds to read every page, then I read the first 100 pages in <i>at most</i> A) 50 minutes B) 170 minutes C) 180 minutes D) 200 minutes	31.
32. Semicircles are drawn on opposite sides of a 2×2 square, as shown. What is the perimeter of the shaded region? A) $4+2\pi$ B) $8+2\pi$ C) $4+\pi$ D) $4-\pi$	32.
33. What is the smallest of 20 consecutive primes whose sum is 639? A) 5 B) 3 C) 2 D) 1	33.
34. I quadrupled the area of a 1×6 rectangular APPLAUSE sign, but left the ratio of its side-lengths unchanged. The perimeter of the new sign is A) 24 B) 28 C) 48 D) 56	34.
35. $\sqrt{1\%} =$ A) $\frac{1}{2}\%$ B) 1% C) 10% D) 100%	35.
36. How many different positive integers are factors of 3^6 ? A) 3 B) 6 C) 7 D) 18	36.
37. Every hour, the second hand of a circular clock moves a total of A) 60° B) 360° C) 3600° D) $21\,600^\circ$	37.
38. The positive-integer factors of <u>?</u> have an average value of 2. A) 3 B) 4 C) 6 D) 8	38.
39. If the marks on the number line are equally spaced, what is the average of the numbers at points A and B? A) $\frac{1}{12}$ B) $\frac{1}{6}$ C) $\frac{1}{5}$ D) $\frac{2}{15}$	39.
40. The sum of the first 2006 positive odd integers is A) 2×1003^2 B) $2^2 \times 1003^2$ C) 5×1003^2 D) 6×1003^2	40.



APPLAUSE!



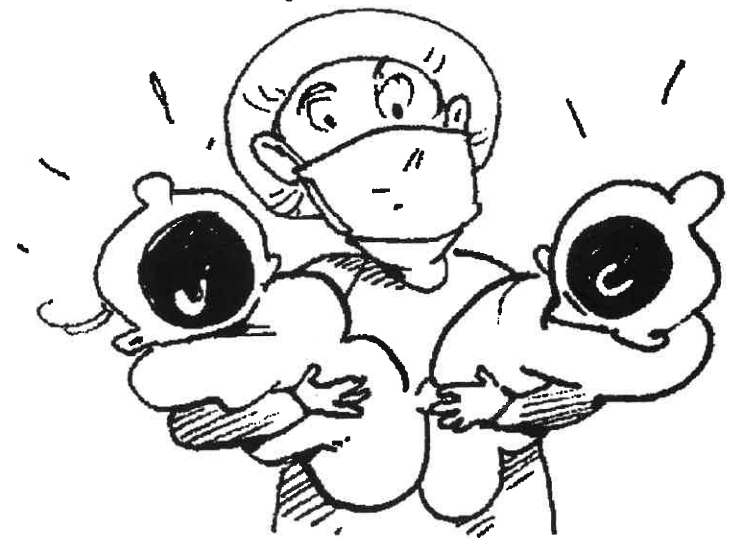
2005-2006 Annual 8th Grade Contest



February 21 or 28, 2006

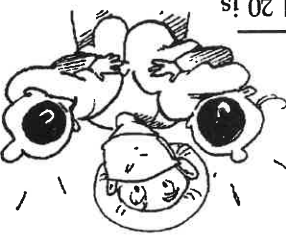

Instructions

8

- **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.



1.	<p>1. $11011 = 1001 + \frac{1}{2}$ A) 1001 B) 10001 C) 10010 D) 10101</p>
2.	<p>2. Earth is the 5th largest of 9 planets. The ratio of the number of planets larger than Earth to the number smaller than Earth is A) 1:1 B) 2:1 C) 4:5 D) 5:4</p> 
3.	<p>3. Of the following, which is the product of 2 consecutive integers? A) 65 B) 80 C) 96 D) 110</p>
4.	<p>4. Two perpendicular lines intersect in exactly A) 0 points B) 1 point C) 2 points D) 4 points</p>
5.	<p>5. The prime factorization of 40 is A) 2×20 B) $2 \times 2 \times 10$ C) $2 \times 4 \times 5$ D) $2 \times 2 \times 2 \times 5$</p>
6.	<p>6. $\frac{2}{3}$ is not the sum of a positive integer and its reciprocal. A) $12\frac{1}{12}$ B) $6\frac{1}{2}$ C) $4\frac{1}{4}$ D) $2\frac{1}{6}$</p>
7.	<p>7. $\frac{2}{1} \times \frac{2}{1} = \frac{2}{1} \div \frac{2}{2}$ A) 4 B) 2 C) $\frac{2}{1}$ D) $\frac{4}{1}$</p>
8.	<p>8. What is the least number of acute angles possible in a triangle? A) 0 B) 1 C) 2 D) 3</p>
9.	<p>9. $0.5 \times 0.5 = 0.25 \times \frac{2}{2}$ A) 1 B) 0.75 C) 0.25 D) 10</p> 
10.	<p>10. There are as many eggs in my basket as there are 2-digit positive integers not divisible by 10. How many eggs are in my basket? A) 78 B) 79 C) 80 D) 81</p>
11.	<p>11. $3^2 + 3^2 = 6^2 - \frac{2}{2}$ A) 2^2 B) 3^2 C) $2^2 + 2^2$ D) $3^2 + 3^2$</p>
12.	<p>12. The product of two even numbers is not always divisible by A) 1 B) 2 C) 4 D) 8</p>
13.	<p>13. I need $\frac{2}{3}$ 4x6 photos to completely fill a 24x40 display board. A) 40 B) 24 C) 20 D) 16</p>
14.	<p>14. $\frac{2}{2} + \frac{3}{3} + \frac{2}{2} + \frac{3}{3} + \frac{2}{2} + \frac{3}{3} =$ A) $3+2$ B) $3-2$ C) $3 \div 2$ D) $2 \div 3$</p>

15.	<p>15. Of the following, which is the least? A) $(1+1) \div (1 \times 1) - 1$ B) $1 + (1 \div 1 \times 1) - 1$ C) $1 + (1 \div 1 \times 1 - 1)$ D) $(1 + 1 \div 1) \times (1 - 1)$</p>
16.	<p>16. What is the average of 10, -10, 5, -5, and 100? A) 0 B) 20 C) 25 D) 100</p>
17.	<p>17. I cut a string 40 m long into 4 equal pieces and formed a rectangle from 1 piece. The sum of the width and length of my rectangle was A) 5 m B) 10 m C) 20 m D) 40 m</p>
18.	<p>18. The ones' digit of the product of 2 consecutive integers could be A) 1 B) 2 C) 3 D) 4</p>
19.	<p>19. Righty's drink is 36% soy milk. Lefty's is 4% soy milk. If equal amounts of each are mixed, the resulting mixture would be $\frac{2}{2}$% soy milk. A) 20 B) 32 C) 36 D) 40</p> 
20.	<p>20. The least common multiple of 8, 12, and 20 is A) 40 B) 60 C) 120 D) 1920</p>
21.	<p>21. Of the following, which is a multiple of 7? A) 749775 B) 735814 C) 784284 D) 770357</p>
22.	<p>22. $\sqrt{2} \times \sqrt{4} \times \sqrt{6} \times \sqrt{8} = \sqrt{2} \times \sqrt{1} \times \sqrt{2} \times \sqrt{3} \times \sqrt{4}$ A) $\sqrt{2}$ B) 2 C) 4 D) 16</p>
23.	<p>23. The average of eight numbers is 0. Their sum must A) equal 0 B) equal 1 C) exceed 0 D) be negative</p>
24.	<p>24. There are as many seconds in 1 hour as there are minutes in A) 24 hours B) 30 hours C) 60 hours D) 90 hours</p>
25.	<p>25. $\frac{2}{2}$ is more than 3 times as many days before July 1 as it is after May 1. A) May 16 B) May 17 C) June 15 D) June 16</p>
26.	<p>26. Of 30 veggies, if 20 were sliced, then 18 were diced, then at most $\frac{2}{2}$ were neither sliced nor diced. A) 2 B) 8 C) 10 D) 12</p> 
27.	<p>27. 40% of $\frac{2}{2}$ is 80. A) 32 B) 120 C) 180 D) 200</p>
28.	<p>28. $(\frac{8}{7})^7 \div (\frac{8}{7})^8 =$ A) 1 B) $\frac{8}{7}$ C) $(\frac{8}{7})^{15}$ D) $(\frac{8}{7})^{56}$</p>