

29. $3 \times \sqrt{25} = 5 \times ?$ A) $\sqrt{3}$ B) $\sqrt{9}$ C) $\sqrt{15}$ D) $\sqrt{81}$	29.
30. When you divide my fraction by yours, the result is 40. When you divide your fraction by mine, the result is A) 0.025 B) 0.25 C) 0.40 D) 2.50	30.
31. The area of rectangle <i>R</i> is 48. If its sides are whole numbers, then its perimeter <i>cannot</i> be A) 28 B) 38 C) 58 D) 98	31.
32. I have twice as many nickels as dimes. My dimes are worth \$3.30. My nickels are worth A) \$1.15 B) \$3.30 C) \$6.60 D) \$13.20	32.
33. Which is true? A) $\frac{3}{7} < \frac{4}{9}$ B) $\frac{6}{13} < \frac{4}{9}$ C) $\frac{8}{17} < \frac{4}{9}$ D) $\frac{2}{3} < \frac{4}{9}$	33.
34. The square of an integer is a <i>perfect square</i> . What is the smallest perfect square that is a multiple of 2, of 4, of 6, and of 8? A) 64 B) 144 C) 576 D) 2304	34.
35. $4^9 \div 9^4 = 2^{18} \div ?$ A) 81^3 B) 18^3 C) 7^8 D) 3^8	35.
36. The greatest common factor of 10×20 and 20×30 is A) 10 B) 10×10 C) 10×20 D) $10 \times 20 \times 30$	36.
37. $\frac{9}{7} \times \frac{7}{5} \times \frac{5}{3} = \frac{3}{5} \times \frac{5}{7} \times \frac{7}{9} \times ?$ A) 27 B) 18 C) 9 D) 3	37.
38. My dog's frisbee is in the shape of a circle whose area is $\frac{1}{\pi}$. How long is a radius of this frisbee? A) $\frac{1}{\pi}$ B) $\frac{1}{2\pi}$ C) $\frac{1}{\pi^2}$ D) $\frac{1}{2\pi^2}$	38.
39. What is the ones' digit of 2003^{2004} ? [Hint: Look for a pattern.] A) 9 B) 7 C) 3 D) 1	39.
40. The value of the 100-term sum $\frac{1}{2} + \frac{3}{2} + \frac{5}{2} + \dots + \frac{195}{2} + \frac{197}{2} + \frac{199}{2}$ is A) 5000 B) 10 000 C) 15 000 D) 20 000	40.



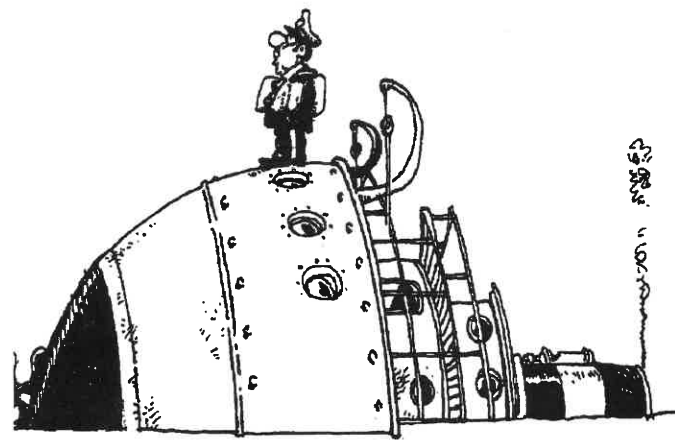
2003-04 Annual 7th Grade Contest

Tuesday, February 17 or 24, 2004

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

1.	A) 0 B) 20 C) 190 D) 990	1. $(10 + 10) \times (10 - 10) =$
2.	A) 1 B) 2 C) 3 D) 4	2. What is the remainder when $1900 + 190 + 19$ is divided by 5?
3.	A) $(2 + 2)^2$ B) $(2 \times 2)^2$ C) $2^2 \times 2^2$ D) $2^2 + 2^2$	3. $2 + (2 \times 2) + 2$ has the same value as
4.	A) 0.8 B) 0.85 C) 0.89 D) 0.99	4. Of the following, which is closest in value to 0.9?
5.	A) 5:15 B) 4:45 C) 4:30 D) 4:15	5. 30 minutes before 5 P.M. = 15 minutes after $\frac{1}{2}$ P.M.
6.	A) 36 B) 27 C) 18 D) 9	6. As my family watched, I won 50% of my horseshoe tosses. If I lost 18 times, then I won $\frac{1}{2}$ times.
7.	A) 111 m B) 1010 m C) 1011 m D) 1110 m	7. $1 \text{ km} + 10 \text{ m} + 100 \text{ cm} =$
8.	A) $4 + \frac{2}{3} = \frac{2}{1} + \frac{1}{2}$ B) 5 C) $5\frac{1}{2}$ D) 6	8. $4 + \frac{2}{3} = \frac{2}{1} + \frac{1}{2}$
9.	A) 22 B) 24 C) 25 D) 26	9. How many positive multiples of 4 are less than 100?
10.	A) 2 B) 32 C) 64 D) 128	10. Increasing each of 64 numbers by 2 increases their sum by
11.	A) 4 B) 400 C) 2.5 D) 25	11. Multiplying a number by 0.25 is the same as dividing it by
12.	A) 50 B) 500 C) 1000 D) 1500	12. $2000 -$ (the average of 1000 and 2000) =
13.	A) 99 B) 24 C) 18 D) 9	13. What is the volume of a rectangular solid with length 3, width 4, and height 2?
14.	A) 20% B) 25% C) 75% D) 80%	14. Of 20 fund-raising volunteers, 4 supervise and 16 wash cars. What percent of the 20 volunteers are supervisors?

15.	A) $\frac{100}{1}$ B) $\frac{60}{36}$ C) $\frac{36}{1}$ D) $\frac{3600}{1}$	15. 36 seconds is $\frac{1}{2}$ of 1 hour.
16.	A) 1 B) 182 C) 183 D) 999	16. $(183 \times 999) - (182 \times 999) =$
17.	A) 2, 2 B) 2, 3 C) 3, 2 D) 3, 3	17. If my sister has 3 brothers and 2 sisters, then my brother has $\frac{1}{2}$ brothers and $\frac{1}{2}$ sisters.
18.	A) $\frac{2}{1} \times 2\frac{1}{2} \times 2\frac{1}{4} \times 2\frac{1}{4} =$ B) $\frac{64}{27}$ C) $8\frac{1}{1}$ D) $\frac{729}{64}$	18. $2\frac{1}{2} \times 2\frac{1}{2} \times 2\frac{1}{4} \times 2\frac{1}{4} =$
19.	A) $\frac{1}{5}$ B) $\frac{1}{4}$ C) $\frac{9}{4}$ D) $\frac{9}{5}$	19. As I waited for my ship to dock, I put nine Ping-Pong balls numbered 1 to 9 into an empty bag, then selected one ball at random. What was the probability that the number on the ball that I selected was even?
20.	A) 6 B) $\frac{5}{6}$ C) $\frac{6}{5}$ D) $\frac{5}{1}$	20. $\frac{2}{1} + \frac{3}{1} = 1 \div \frac{1}{2}$
21.	A) less than 1 B) more than 1 C) odd D) negative	21. The reciprocal of any number greater than 1 is
22.	A) 10 B) 100 C) 1000 D) 10 000	22. 100 tenths = $\frac{1}{2}$ hundredths
23.	A) 16 B) 20 C) 60 D) 64	23. When the <i>Bike Teens</i> perform at the circus, for every performer that throws, there are four that smile. This means that $\frac{1}{2}$ of the 80 <i>Bike Teens</i> smile while performing.
24.	A) 0 B) 5 C) 8 D) 10	24. $(1 - \frac{5}{1}) + (2 - \frac{5}{2}) + (3 - \frac{5}{3}) + (4 - \frac{5}{4}) =$
25.	A) 80° B) 90° C) 95° D) 105°	25. In $\triangle ABC$, if $m\angle A = 80^\circ$, then $m\angle C$ cannot be
26.	A) $\sqrt{4^2 + \sqrt{12^2}} = \sqrt{7^2} + \sqrt{?}$ B) 9^2 C) 6^2 D) 3^2	26. $\sqrt{4^2 + \sqrt{12^2}} = \sqrt{7^2} + \sqrt{?}$
27.	A) 20 B) 30 C) 32 D) 42	27. If the product of two positive primes is 87, then their sum is
28.	A) 0.001 B) 0.01 C) 0.1 D) 1	28. $1\% = 10 \times \frac{1}{?}$