

30. At most ? squares with side-length 4 can fit inside a rectangle with area 2000 without overlapping.
A) 121 B) 125 C) 250 D) 500

31. What percent of a 3-hour concert will I see if I'm there for 18 minutes?
A) 6% B) 10% C) 21% D) 30%

32. If an equilateral triangle has integer sides, its perimeter *cannot* be
A) 915 B) 615 C) 315 D) 115



33. How many different positive integers are factors of $2006 = 2 \times 17 \times 59$?
A) 4 B) 6 C) 8 D) 9

34. Of 60 kids, if 20 like math, 30 like art, and 10 like both, then how many like neither?
A) 0 B) 10 C) 20 D) 30

35. If $1 + 3 + 5 + \dots + 99 = 2500$, then $2 + 4 + 6 + \dots + 100 =$
A) 2550 B) 2599 C) 2600 D) 5000

36. Bob counted by 3's starting with 2. He got 2, 5, 8, 11, 14, 17, Ann counted by 2's starting with 3. She got 3, 5, 7, 9, 11, 13, Bob's 100th number is ? more than Ann's 100th number.
A) 97 B) 98 C) 99 D) 100

37. A tree with 20 times as many leaves as branches could have
A) 399 leaves B) 400 leaves
C) 401 leaves D) 410 leaves



38. After I cut some red tape into 50 pieces, I then cut each of the 50 pieces into 5 smaller pieces. *At most* how many cuts did I make altogether?
A) 249 B) 250 C) 299 D) 300

39. When folded along the lines shown, which *cannot* form a cube?
A) B) C) D)

40. If 4 flips = 3 flops, and 2 flops = 4 flaps, then ? flips = 6 flaps.
A) 2 B) 3 C) 4 D) 6

30.

31.

32.

33.

34.

35.

36.

37.

38.

39.

40.



2006-2007 Annual 6th Grade Contest

Tuesday, February 20 or 27, 2007


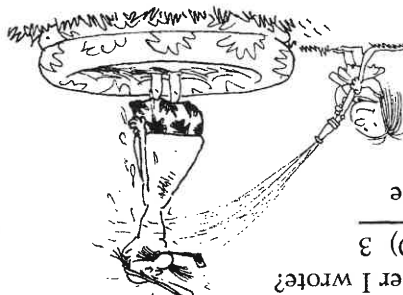
6


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 6

16.	To get the greatest possible result, round 4454 to the nearest A) one B) ten C) hundred D) thousand
17.	An eclipse lasting from 3:45 P.M. to 6:35 P.M. was half over at A) 4:50 P.M. B) 4:55 P.M. C) 5:05 P.M. D) 5:10 P.M.
18.	(hundreds' digit of 24 683 579) \times (ten-thousands' digit of 24 683 579) = A) 56 B) 40 C) 30 D) 10
19.	The average price of twelve \$4 tickets and four \$12 tickets is A) \$4 B) \$6 C) \$8 D) \$12
20.	 $2 \times 4 \times 6$ is a factor of A) $2 \times 3 \times 4 \times 5$ B) $3 \times 4 \times 5 \times 6$ C) $4 \times 5 \times 6 \times 7$ D) $5 \times 6 \times 7 \times 8$
21.	On a calendar, I put 1 grain of sand on May 1, 2 grains on May 2, 4 grains on May 3, and so forth, doubling the number of grains each day. On what day will I put down the 500th grain? A) May 9 B) May 10 C) May 25 D) June 19
22.	Divide the remainder in $(888 \div 77)$ by 6. The new remainder is A) 0 B) 1 C) 3 D) 5
23.	The total value of an equal number of pennies and dimes <i>can't</i> be A) \$10.01 B) \$11.00 C) \$11.11 D) \$11.12
24.	$100\,001^2$ exceeds $100\,000^2$ by A) 200 001 B) 100 001 C) $200\,001 \times 10^6$ D) $100\,001 \times 10^9$
25.	I wrote two whole numbers whose sum is less than their product. What is the smallest possible whole number I wrote? A) 0 B) 1 C) 2 D) 3
26.	A circular pool that's 2 m wide has a circumference of A) π m B) 2π m C) 4π m D) 5π m
27.	 $\sqrt{40 \times 90} =$ A) 36 B) 50 C) 60 D) 120
28.	The only prime factor of $\frac{1}{2}$ is 2. A) 2222 B) 2468 C) 4848 D) 8192
29.	The l.c.m. of 8 and 10 equals the greatest common factor of 80 and A) 160 B) 120 C) 100 D) 80

1.	How many dozens are in $24 + 36 + 48 + 60$? A) 7 B) 9 C) 10 D) 14
2.	If gumballs cost a quarter each, then the cost of the 40 gumballs that I ate today was A) \$100 B) \$65 C) \$10 D) \$1
3.	$45 \div 3 = 3 \times \frac{1}{2}$ A) 3 B) 5 C) 9 D) 15
4.	$1.25125 \times \frac{4}{5} = 1.25125 \times \frac{1}{2}$ A) 1.20 B) 1.25 C) 1.40 D) 1.75
5.	If the area of each of the 3 squares shown is 9, what is the perimeter of the entire figure?  A) 18 B) 24 C) 27 D) 36
6.	Of the following quotients, which is greatest? A) $64 \div 4$ B) $112 \div 7$ C) $144 \div 9$ D) $194 \div 12$
7.	If twice my height is 450 cm, then my height divided by 5 is A) 180 cm B) 135 cm C) 90 cm D) 45 cm
8.	The largest power of 20 that's a factor of $20 \times 40 \times 60$ is A) 20^1 B) 20^3 C) 20^6 D) 20^{2400}
9.	If we eat 3 slices every 20 minutes, then we'll eat $\frac{1}{2}$ slices in 1 hour. A) 9 B) 12 C) 15 D) 45
10.	$99 \times 99 = \frac{1}{2} - 99$ A) 199×99 B) 198×99 C) 100×100 D) 100×99
11.	I can write the number $\frac{1}{2}$ as the product of 3 numbers, all primes. A) 25 B) 35 C) 45 D) 55
12.	200% of 6 = 300% of $\frac{1}{2}$ A) 2 B) 3 C) 4 D) 12
13.	Of 132 clowns, half are redheads. Half the rest are blonde. The ratio of the number of blonde clowns to the number of redheaded clowns is A) 33:66 B) 44:66 C) 66:66 D) 55:77
14.	The number midway between 2 and 12 is A) 5 B) 6 C) 7 D) 8
15.	$3 \times 10^4 + 4 \times 10^3 + 5 \times 10^2 + 6 \times 10^1 + 7 \times 10 =$ A) 345670 B) 35170 C) 34170 D) 34567