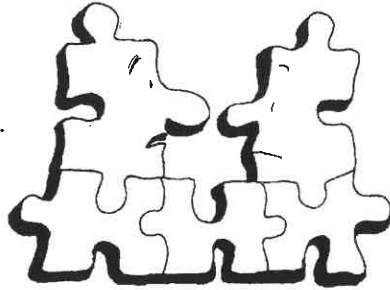


30. How many of the numbers 3, 12, 24, and 48 are factors of every whole number that is divisible by both 6 and 8?
 A) 1 B) 2 C) 3 D) 4

31. How long is a radius of the largest circle whose points are all either inside of or on a square whose perimeter is 8?
 A) 8 B) 4 C) 2 D) 1

32. I plan to buy 2 more \$6 puzzles than \$5 puzzles, so for exactly \$100, I plan to buy ? puzzles.
 A) 17 B) 18 C) 19 D) 20



33. $\sqrt{3 \times 12} \times \sqrt{4 \times 9} =$
 A) 2×18 B) 18×18
 C) 3×2 D) 36×36

34. If I sit in a row of 26 seats, then the ratio of the number of seats on my left to the number of seats on my right could be
 A) 1:1 B) 1:2 C) 1:3 D) 1:4

35. The ones' digit of the product of 2008 consecutive integers, each greater than 0, can have up to ? different possible values.
 A) 1 B) 5 C) 9 D) 10

36. If $2+4+6+\dots+100 = 2550$, then $1+3+5+\dots+99 =$
 A) 2500 B) 2475 C) 2450 D) 1275

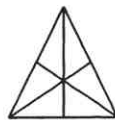
37. With his hat on, the Invisible Man is 180 cm tall. His hat adds 20% to his height. Without his hat, the Invisible Man's height is ? cm.
 A) 144 B) 150 C) 160 D) 216



38. For ? of the 1440 minutes in a 24-hour period, one or more 5s appear in a digital clock's display.
 A) 362 B) 450 C) 472 D) 492

39. A square whose area is 64 is split into two rectangles whose areas differ by 16. The perimeter of the smaller rectangle is
 A) 20 B) 22 C) 24 D) 26

40. How many different triangles of all sizes can be traced along lines already drawn in the diagram?
 A) 16 B) 15
 C) 13 D) 11



2007-2008 Annual 6th Grade Contest

Tuesday, February 19 or 26, 2008

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

1. Sue is twice as old as Sam. If Sam's age is 18, then Sue's age is
A) 9 B) 27 C) 32 D) 36
2. In the "Couples Only" Run, 4 dozen people participated. How many couples participated in the "Couples Only" Run?
A) 12 B) 24 C) 48 D) 96
3. The Run started at 9:15 A.M. If it ended at 4:11 P.M., then the Run was half over at $\frac{1}{2}$ P.M.
A) 12:43 B) 1:13 C) 1:33 D) 3:28
4. Which is 1 less than a prime factor of 375?
A) 4 B) 24 C) 124 D) 374
5. If today is Tuesday, what day was it 43 days ago?
A) Sunday B) Monday C) Wednesday D) Thursday
6. If a triangle has perimeter 72, the average length of a side is
A) 3 B) 18 C) 24 D) 36
7. In which of the following is the remainder an odd number?
A) $9898 \div 3$ B) $9898 \div 4$ C) $9898 \div 6$ D) $9898 \div 7$
8. $(20+30+40+50) \div 4 = (10+15+20+25) \div ?$
A) 1 B) 2 C) 4 D) 8
9. In 12345678910, the ratio (# of odd digits) : (# of even digits) =
A) 1:2 B) 2:3 C) 1:1 D) 6:5
10. Each of the following is a factor of $23 \times 24 \times 25 \times 26$ except
A) 4 B) 5 C) 6 D) 7
11. Sally Sandy, who began with \$1, spent 45¢ on a jar of salt. After Peppy Patty, who began with \$1.45, bought a jar of pepper for $\frac{1}{2}$, she and Sally Sandy were left with the same amount of money.
A) 45¢ B) 55¢ C) 90¢ D) \$1
12. $3^2 \times 6^2 \times 9^2$ has the same value as
A) $3^6 \times 6^3$ B) $3^6 \times 9^3$ C) $6^2 \times 9^3$ D) $6^3 \times 9^2$
13. I can cut a square of area 36 into at most $\frac{1}{2}$ squares of perimeter 4.
A) 4 B) 9 C) 18 D) 36
14. Of the following, which ratio most nearly equals the ratio 3:2?
A) 13:12 B) 15:12 C) 19:12 D) 23:12
15. Find the average of one 1, two 2s, three 3s, and four 4s.
A) 2 B) 3 C) 4 D) 5



16. Ed began by taking a sip of milk. He took one more sip after every 2 bites of his sandwich. Ed took 21 bites of his sandwich, so he took $\frac{1}{2}$ sips of milk.
A) 7 B) 8 C) 11 D) 12
17. $444 + 888 = 333 \times \frac{1}{2}$
A) 2 B) 3 C) 4 D) 6
18. $123\ 123\ 123\ 123 \div 123\ 123 =$
A) 1000001 B) 1001001 C) 1010101 D) 1111111
19. The product of all the factors of 12 is
A) 12 B) 12×12 C) $6 \times 8 \times 12$ D) $12 \times 12 \times 12$
20. In 2 years, I'll be twice my age 4 years ago. How old am I now?
A) 8 B) 10 C) 12 D) 14
21. A rectangle with perimeter 20 has an area of at most
A) 20 B) 25 C) 100 D) 400
22. Altogether, an octagon, a hexagon, and a pentagon have $\frac{1}{2}$ sides.
A) 18 B) 19 C) 20 D) 21
23. The greatest common divisor of $3 \times 4 \times 5$ and $13 \times 14 \times 15$ is
A) $3 \times 4 \times 5$ B) $2 \times 3 \times 5$ C) 3×5 D) 5
24. The product of the numbers 3 and $\frac{1}{2}$ is equal to their sum.
A) $\frac{3}{2}$ B) $\frac{4}{3}$ C) $\frac{3}{4}$ D) $\frac{2}{3}$
25. $99\ 990^2 \div 9999^2 =$
A) 1 B) 10 C) 100 D) 1000
26. If the center of a circular pool is 2 m from the pool wall, then the circumference of the pool is $\frac{1}{2}$ m.
A) π B) 2π C) 4π D) 8π
27. If my daughter hoses me once every 4 sunny days, and if it's sunny 2 days out of 3, then I expect to get hosed $\frac{1}{2}$ times in 36 days.
A) 6 B) 9 C) 12 D) 24
28. $50 \times 40 \times 30 \times 20 \times 10 = 25 \times 20 \times 15 \times 10 \times 5 \times \frac{1}{2}$
A) 2 B) 10 C) 20 D) 32
29. 100% of $10^2 = 10 \times \frac{1}{2}$
A) 10 B) 10^2 C) 10^3 D) 10^4

