Cedar Ridge Middle School Mathematics Tournament

February 10, 2001

Sixth Grade Exam

Directions:

- NO books, notes, calculators, or other aids are allowed. Scratch paper will be provided by the exam supervisor.
- "Bubble" each answer neatly on the Scantron Form using a #2 pencil.
- If none of the choices listed (A, B, C, D) are correct, choose E ("none of these")
- The time limit for the exam will be one hour. You are expected to remain in the room the entire time.
- When time is called, give your Scantron Form to the supervisor before leaving.
- You may keep your copy of the exam.

2001 Cedar Ridge Middle School 6th Grade Test

1. Find the difference between the Greatest Common Factor (GCF) and the Least Common Multiple (LCM) of 16 and 64.
   a. 64 b. 94 c. 56 d. 48 e. none of these

2. If A = the number of sides of a hexagon, and B = the number of sides of a decagon, find $AB + B^2 + A$.
   a. 166 b. 155 c. 86 d. 175 e. none of these

3. $\sqrt{100} - \sqrt{16} + \sqrt{64}$
   a. 14 b. 10 c. 25 d. 29 e. none of these

4. Solve for x. $2x - 8 = 20$
   a. 12 b. 14 c. 6 d. 10 e. none of these

5. The length of a rectangle is twice its width. The area is 32. Find the perimeter of the rectangle.
   a. 36 b. 24 c. 12 d. 32 e. none of these

6. $.7 + 2.7 + 7 + .27$
   a. 6.8 b. 16.97 c. 4.37 d. 10.4 e. none of these

7. What is the measure of the supplement to a 60° angle?
   a. 30° b.120° c. 40^0 d. 60^0 e. none of these

8. Find the probability of rolling a composite number when a fair six sided die is rolled once.
   a. 1/3 b. 2/3 c. 1/6 d. 1/2 e. none of these

9. Jake ordered a large pizza and Alan ordered a small pizza. Large pizzas have 15 inch radii. Small pizzas have 12 inch radii. How much bigger is the large pizza than the small pizza?
   a. 81π in^2 b. 3π in^2 c. 6π in^2 d. 181π in^2 e. none of these

10. $3a = 120$ and $8b = 4$ Find ab.
    a. 40 b. 5120 c. 80 d. 20 e. none of these

11. By how much does $2^2 + 3^2 + 4^2$ exceed the product of 2, 3, and 4.
    a. 5 b. 6 c. 9 d. 19 e. none of these

12. Ally really wants an A in math. If her test scores were 92, 87, 100, 95, and 86, what must she make on her sixth test for her average to be 93?
    a. 98 b. 92 c. 93 d. 100 e. none of these

13. Find the 10th term in the sequence. 1, 1, 2, 3, 5, 8,.....

a. 13 b. 55 c. 16 d. 30 e. none of these

14. $14 \times \frac{1}{2} + 40 \div 2 \div \frac{1}{2}$

a. 31 b. 57 c. 17 d. 47 e. none of these

15. Sally's mom bought her a sweater. The original price of the sweater was $34.00. It was on sale for 20% off the original price. Sally's mom had a coupon for an additional 15% off the sale item. What was the final price of the sweater if sales tax was 8% ?

a. $24.97 b. $20.33 c. $17.68 d. $24.82 e. none of these

16. John did three times as many push-ups on Friday as Monday. On Wednesday and Thursday he did equal amounts of push-ups. He did half as many on Monday as Tuesday. On Wednesday, he increased his previous number by 5. How many push-ups did he do from Monday through Friday if he did twelve on Tuesday?

a. 142 b. 78 c. 70 d. 118 e. none of these

17. What is the sum of the composite numbers between one and ten , and the prime numbers between 20 and 30?

a. 89 b. 100 c. 79 d. 80 e. none of these

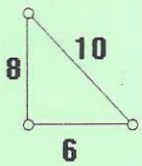
18. Jan bought 2 pounds of sour jelly bellys at $1.30 per pound. She bought $\frac{1}{2}$ pound of sour straws at $.80 per pound. What was her average cost per pound of candy?

a. $1.13 b. $1.00 c. $.70 d. $1.20 e. none of these

19. On Brian's test he correctly answered 20 out of 25 questions. What percentage did he answer incorrectly?

a. 20% b. 80% c. 25% d. 5% e. none of these

20. Find the product of the perimeter and area of the triangle.



a. 720 b. 576 c. 960 d. 1152 e. none of these

21. Meredith bought 20 donut holes and 4 donuts for a total of $7.00. If donuts were 2 for a dollar, how much was each donut hole?

a. $.75 b. $.15 c. $.50 d. $.25 e. none of these

22. In a quadrilateral PQRS, m<P=100°, m<Q=60°, and m<S=120°. Find m<R.

a. 180° b. 120° c. 80° d. 20° e. none of these

23. What is the percent of increase of an item if it was bought for $4,000.00 and resold for $5,000.00?

a. 80% b. 125% c. 25% d. 20% e. none of these

24. The distance from Bombamdoey to Crawazawaza is 7.5 inches on a map. If the map's scale is $\frac{1}{2}$ " = 2 miles, what is the distance (in miles) between these two places?

a. 30 b. 15 c. 7.5 d. 3.75 e. none of these

25. $\dfrac{\frac{1}{6} - \frac{1}{8}}{\frac{5}{6}}$

a. 1/ 20 b. 5/ 144 c. 5/ 4 d. 3/ 5 e. none of these

TB1. What is the circumference of a circle with an area of 50.24 m^2 ?

TB2. Valerie's watch stopped at 9:20 p.m. What was the measure of the larger angle formed by the hands of the clock?

TB3. Find m<y