Cullman Middle School Math Tournament
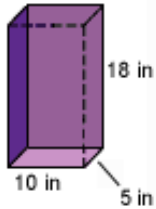## 2010 5ᵗʰ Grade Test

1. Evaluate. $(19 \times 21 \times 55) \div (55 \times 21 \times 19)$
    A) 0 B) 1 C) 2 D) -1

2. Find $2^{10} - 24$
    A) -4 B) 488 C) 1,000 D) 1048

3. If $4x = 52$, find $3x + 12$
    A) 28 B) 29 C) 54 D) 51

4. What is the sum of the two largest prime numbers less than 100?
    A) 184 B) 186 C) 188 D) 196

5. Find the sum of the exponents in the prime factorization of 80.
    A) 3 B) 4 C) 5 D) 6

6. Find z. ½ + ½ + ¼ + z = 6 ¼
    A) 4 B) 5 C) 5 ¼ D) 4 ¼

7. Which is the largest value?
    A) 10 ÷ 1/5 B) 12 ÷ 1/4 C) 8 ÷ 1/6 D) (50)(3/4)

8. If today is Saturday, what day will it be 113 days from now?
    A) Thursday B) Friday C) Saturday D) Sunday

9. Find 2! + 4!.
    A) 6! B) 4! + 2 C) 3! + 3! 2! D) 2! + 2! + 2!

10. How many perfect squares are there between 10 and 90?
    A) 4 B) 5 C) 6 D) 7

11. How many total diagonals can be drawn in an octagon?
    A) 5 B) 8 C) 20 D) 40

12. Lee has 8 quarters, five dimes, and five nickels in his pocket. If one coin is chosen at random, what is the probability that it will not be a quarter?
    A) 5/9 B) 4/9 C) 9/5 D) 9/4

13. $(301 + 302 + 303 + \ldots + 325) - (1 + 2 + 3 + \ldots + 25) = \underline{\qquad}$
    A) 25 B) 2500 C) 5000 D) 7500

14. The sum of two numbers is 8 and the difference of the numbers is 2. Find the product of the numbers.
    A) 10 B) 15 C) 16 D) 18

15. A hexagon and a square have the same perimeter. If each side of the hexagon is 6 in, find the area of the square.

A) 9 in²   B) 24 in²   C) 36 in²   D) 81 in²

16. If 6 bears = 2 cats, then 8 cats = _____ bears.

A) 0   B) 10   C) 24   D) 72

17. Two-thirds of the 150 seats at the movie were filled. How many were empty?

A) 10   B) 50   C) 100   D) 2

18. Subtract 2 lbs 15 oz from 4 lb 4 oz.

A) 7 lb 3 oz   B) 2 lb 5 oz   C) 2 lb 9 oz   D) 1 lb 5 oz

19. Find the total number of days in the years 2010, 2011, 2012 and 2013.

A) 365   B) 366   C) 1460   D) 1462

20. The number _____ equals one-fourth of its own reciprocal.

A) ½   B) ¼   C) 2   D) 4

21. 2 gallons 4 quarts 2 pints = _____ cups

A) 28   B) 48   C) 52   D) 34

22. Divide. 0.5 ÷ 10,000

A. 0.0005   B) 0.00005   C) 0.000005   D) 0.005

23. Find the surface area of the rectangular prism.

10 in   18 in   5 in   length = 10 in, height = 18 in and width = 5 in

A) 33 in²   B) 540 in²   C) 640 in²   D) 900 in²

24. Simplify: 13 + (-12) – 47 – (-62) + (-28)

A) 12   B) – 80   C) – 136   D) - 4

25. If 2x + 3 = - 5 and 3y – 4 = - 10, find $x^2 – y^2$.

A) 12   B) - 6   C) 20   D) - 20

Tiebreaker 1   Find the sum of the complement and supplement of 45°.
Tiebreaker 2   Find the volume of a cylinder with diameter 6 in and height 4.5 in.
          Use 3.14 for π.
Tiebreaker 3   Find the sum of the first 8 Fibonacci numbers.

Turn in the pink Scantron answer sheet to the monitor. You may keep the test.