Cullman Middle School Math Tournament
2011 5th Grade Test

1. Find the third angle of a triangle if two angles measure 80° and 70°.
   A) 20° B) 30° C) 150° D) 180°

2. How many primes between 1 and 50 are divisible by 2?
   A) 7 B) 2 C) 1 D) 0

3. If 6x + 1 = 25 and 2y = 6, find x + y.
   A) 8 B) 4 1/3 C) 7 D) 12

4. Divide 314,000,000 by 100,000,000.
   A) 0.314 B) 3.14 C) 31.4 D) 314

5. Find the area of a circle with circumference of 16π.
   A) 32π B) 64 π C) 16 π D) 256 π

6. Find $x^3 - y^3$ if x = 10 and y = 9.
   A) 271 B) 1 C) 3 D) 973

7. Find the prime factorization of 750.
   A) 10•75 B) 2•3•5•5 C) 2•3•5•5•5 D) 1•750

8. A cookie recipe calls for 2 ½ cups of sugar. How much sugar would you need if you tripled the recipe?
   A) 5 cups B) 5 ½ cups C) 6 ½ cups D) 7 ½ cups

9. If $a \Delta b = (a + b) - (a - b)$, find $2 \Delta 3$.
   A) 4 B) 6 C) 5 D) 2

10. Each letter in the word MATHEMATICS is written on a separate piece of paper and put in a bag. What is the probability that the first piece of paper drawn from the bag will be a vowel?
    A) 11/4 B) 4/11 C) 4/7 D) 7/4

11. Consider the factors of 30. How many are even?
    A) 2 B) 3 C) 4 D) 5

12. Solve for x. 14x – 15 = 41
    A) 14 B) 3/2 C) 3 D) 4

13. Ben bought a baseball glove for $25. If tax is 8%, what was the final price?
    A) $2 B) $25 C) $27 D) $33

14. The perimeter of a rectangle is 68 cm. If the length is 20 cm, what is the width?
A) 14 cm B) 20 cm C) 28 cm D) 40 cm

15. How many inches in 4 yd 2ft 3 in?
A) 75 in B) 149 in C) 171 in D) 204 in

16. 5 m + 2 cm + 3 mm = _____ mm
A) 523 B) 5.023 C) 5,023 D) 50.23

17. If the ordered pair (- 4, 6) is translated 3 units right and 7 units down, in which quadrant will the translated ordered pair be located?
A) I B) II C) III D) IV

18. Write from least to greatest. ½ , 3/8, 1/6, 5/12
A) 1/6, 3/8, 5/12, ½ B) ½, 3/8, 1/6, 5/12 C) 1/6, ½ , 5/12, 3/8 D) 1/6, 3/8, 5/12, ½

19. Find the missing number. 12 x 10 x ____ = 4 x 5 x 12 x 6
A) 6 B) 12 C) 120 D) 144

20. Subtract five-eighths from nine-tenths.
A) 2 B) 0.275 C) 0.325 D) 0.625

21. On Feb. 10, 2011 the temperature in Oklahoma was - 31°F, the coldest ever. On Feb. 18, the high temperature was 80°F. What was the change in temperature from – 31°F to 80°F?
A) 80°F B) 31°F C) 49°F D) 111°F

22. Name the property demonstrated by a x b x 1 = a x b
A) Distributive B) Identity C) Associative D) Commutative

23. Simplify. - 9 + 7 – 8 + 6 – 7 + 5 – 6 + 4 – 5 + 3 – 4 + 2 – 3 + 1
A) - 10 B) – 12 C) - 15 D) - 16

24. A regular decagon has a perimeter of 125 in. Find the length of one side.
A) 8 in B) 10 in C) 12.5 in D) 1,250 in

25. If P = number of sides in a pentagon, I = the first non-negative integer, D = number of days in a leap year, A = sum of the measures of the angles in a triangle and Y = number of years in a decade, find P + I + D + A + Y.
A) 651 B) 652 C) 561 D) 562

Write the tiebreaker answers on the back of your Scantron.
Tiebreaker 1: Adam's math grades are 90, 85, 98, 94, and 95. Find his mean test score.
Tiebreaker 2: If $4^{\frac{1}{2}} = 2$ and $9^{\frac{1}{2}} = 3$, find $36^{\frac{1}{2}} + 100^{\frac{1}{2}}$
Tiebreaker 3: 30 billion divided by 20 million = _____