For all questions, answer choice (E) NOTA means that none of the given answers is correct.
Good luck!

1. Express 0.25 as a fraction.
   A. $\frac{1}{8}$ B. $\frac{1}{6}$ C. $\frac{1}{4}$ D. $\frac{1}{2}$ E. NOTA

2. If X is equal to 11, and Y is equal to 4, what is XY=?
   A. 2.74 B. 44 C. 80 D. 55 E. NOTA

3. If a ratio is expressed as 5/20, what is the value of X in the equivalent ratio with 4/X?
   A. 15 B. 80 C. 12 D. 16 E. NOTA

4. A building in Pensacola is 57.8 meters tall. What is the height of the building in centimeters?
   A. 5780 B. 57800 C. 5870 D. 58700 E. NOTA

5. If the base of a triangle is 2 cm, and the height is 6cm, what is the area of the triangle?
   A. 7 B. 8 C. 9 D. 6 E. NOTA

6. A dodecagon has 12 sides. What is the product of the number of sides in a dodecagon and the number of sides on a quadrilateral?
   A. 46 B. 36 C. 40 D. 12 E. NOTA

7. What is the closest prime number to 70?
   A. 71 B. 69 C. 90 D. 67 E. NOTA

8. The sum of two prime numbers is 20. One number is one less than two times the other number. What is the product of these two numbers?
   A. 98 B. 91 C. 137 D. 104 E. NOTA

9. There are 365 days in a non-leap year, and 366 days in a leap year. If Thomas is born on January 17th, in a non-leap year, how many full days will pass until his next birthday?
   A. 366 B. 365 C. 364 D. 369 E. NOTA

10. What is the sum of all positive factors of 42?
    (Note: 1 and 42 <u>do count</u> as positive factors of 42.)
    A. 102 B. 79 C. 83 D. 96 E. NOTA

11. If 2/5 of a cup of fish food can feed 24 goldfish, how many goldfish can be fed with 3 cups of fish food?

A. 120 B. 144 C. 180 D. 168 E. NOTA

12. Ami has 37 apples and 45 Oreos. If Ami eats all of the Oreos, but only eats 40% of the apples, how many apples, to the nearest whole number, does she have left?
A. 19 B. 14.8 C. 18 D. 15 E. NOTA

13. From an 8x8x8 cube, a 2x2x2 cube is removed from each corner.
What fraction of the 8x8x8 cube is removed?
A. $\frac{1}{4}$ B. $\frac{1}{8}$ C. $\frac{1}{2}$ D. $\frac{3}{32}$ E. NOTA

14. Assume that one gallon of water weighs 5 pounds, and that it has a volume of .5 cubic meters. What is the weight, in pounds, of 4 gallons of water?
A. 20 B. 2.5 C. 28.6 D. 49.7 E. NOTA

15. What is the sum of 13 and its square?
A. 180 B. 182 C. 24 D. 79 E. NOTA

16. The sum of the first N even numbers from zero is 20. What is the largest even number in the sequence?
A. 8 B. 12 C. 6 D. 20 E. NOTA

17. Given: 1 mile = 5280 feet = 8 furlongs.
A horse's average speed in a 6-furlong race is 40 feet per second.
How long, in seconds, does the horse take to complete this race?
A. 94 sec B. 96 sec C. 99 sec D. 100 sec E. NOTA

18. What number is 7 less than 10 divided by 10?
A. –7 B. –6 C. –5 D. –4 E. NOTA

19. A snake sheds 20% of his skin per hour. After the skin is completely shed, it takes 4 hours to regrow his new skin. What is the total number of minutes elapsed from the start to finish of the process?
A. 120 B. 540 C. 280 D. 175 E. NOTA

20. A traffic light turns green every 30 seconds. How long will it take, in minutes, for the traffic light to turn green 20 times, if the light starts on green.
A. 20 B. 10 C. 60 D. 15 E. NOTA

21. $4 \times 4^4 =$
A. 64 B. 16 C. 1024 D. 1064 E. NOTA

22. Andrew can run a route that is 145098 feet long in 35 minutes. What is his speed in feet per second, rounded to the nearest foot?
A. 69 B. 58 C. 70 D. 39 E. NOTA

23. A circle with diameter 8 cm is traced onto a rectangular piece of paper with 12x12 cm dimensions. What percent, rounded to the nearest whole number, of the paper is filled with the circle? (Note: use 3.14 as an estimation of π)
A. 21.5% B. 22.8% C. 23.4% D. 24.2% E. NOTA

24. Which number contains the largest number of factors?
A. 4 B. 9 C. 7 D. 8 E. NOTA

25. Beth must build a fence around a square garden with a 200-foot perimeter. Fence posts, which are needed every 5 feet, cost $38 each. The fencing itself is $3 for every fence post. What will be the total cost of Beth's project?
A. $1284 B. $1440 C. $1936 D. $1640 E. NOTA

26. If a circle has a line that divides it into two equal halves, and the two halves have radii of 4, what is the diameter of the original circle?
A. 2 B. 3 C. 4 D. 5 E. NOTA

27. A train leaves from Pensacola at 4:00 pm and arrives in Tallahassee at 7:00 pm after traveling a distance of 190 miles. What speed did the train travel in miles per hour?
A. 95 B. 63.3 C. 59 D. 120 E. NOTA

28. If the Grinch can eat 1 cake per hour, how many cakes can he eat in a year?
A. 7850 B. 8760 C. 6745 D. 2464 E. NOTA

29. If 2^3 = 8, and 2^2= 4, what is 2^0?
A. 1 B. 2 C. 3 D. 6 E. NOTA

30. Big Middle School sends six 6^{th} graders, eight 7^{th} graders, and ten 8^{th} graders to the PI Competition. This represents 2% of their 6^{th} graders, 4% of their 7^{th} graders, and 5% of their 8^{th} graders. What is the total number of 6^{th}, 7^{th}, and 8^{th} graders who attend Big Middle School?
A. 700 B. 720 C. 750 D. 780 E. NOTA