MathMatters Competition
Beehive Science and Technology Academy
November 12, 2022

5th Grade
TEST BOOKLET

Instructions:
1) Do not open your testing booklet until instructed to do so.
2) You will have 40 minutes to complete 30 questions. Each question is multiple choice with answer selections a, b, c, d.
3) All answers must be indicated by filling in the circles on the **answer sheet**. Be sure to fill in each circle completely. No answers written in the test booklet will be counted.
4) Each question is worth 1 point, except for the last 5 questions which are worth 2 points. Remember that this is a competition, not a test. There is no failing or passing score.
5) Calculators are **not** allowed.

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1) Which of the following is the greatest?
    a) $20 + 16$
    b) $20 - 16$
    c) 20×16
    d) $20 \div 16$
	5) If two angles in a right triangle have equal measures, each angle measures
	    a) 30°
	    b) 45°
	    c) 60°
	    d) 75°

2) If I eat 3 meals a day, then I eat _?_ meals in two weeks.
    a) 6
    b) 14
    c) 21
    d) 42
	6) Algebra books cost $12.50 each, and geometry books cost $14 each. How much do 6 algebra books and 5 geometry books cost in total?
	    a) $145.00
	    b) $146.50
	    c) $150.00
	    d) $151.50

3) $111 \div 3 + 111 \div 3 + 111 \div 3 =$
    a) 37
    b) 74
    c) 111
    d) 333
	7) How many whole numbers are greater than 30 and less than 70?
	    a) 38
	    b) 39
	    c) 40
	    d) 41

4) Of the following, _?_ is *not* a whole number.
    a) 0.3×5
    b) 0.4×5
    c) 0.5×4
    d) 3×5
	8)
	
	$25 \times 1 + 25 \times 3 + 25 \times 5 + 25 \times 7 + 25 \times 9 = 25 \times \; ?$
	
	    a) 24
	    b) 25
	    c) 125
	    d) 945

9) 1 + 2 + 3 + 4 + 996 + 997 + 998 +999 =

    a) 4000
    b) 4001
    c) 4002
    d) 4003

13) Bert and Ernie blew up a lot of balloons! For every 3 balloons that Bert blew up, Ernie blew up 5. If Bert blew up 21 balloons, then Ernie blew up _?_ balloons.
    a) 23
    b) 25
    c) 35
    d) 56

10) Last season, Tom scored 3 times as many points as Jerry. Together they scored a total of 100 points. How many points did Tom score?
    a) 25
    b) 33
    c) 75
    d) 99

14) Divide the sum of any number greater than 0 and its square by the original number. Subtract the original number from the quotient. You get
    a) 0
    b) 1
    c) 2
    d) 3

11) In one week I spent a total of $120. The next week, I spent a total of $132. I spent an average of _?_ dollars per day during the two weeks.
    a) 18
    b) 36
    c) 126
    d) 252

15) How many whole numbers less than 20 are divisible by 6 but not by 3?
    a) 0
    b) 1
    c) 2
    d) 3

12) Which of the following is a prime number?
    a) 2013
    b) 2017
    c) 2021
    d) 2022

16) The lengths of two sides of a triangle are 2022 and 2023. If the perimeter of the triangle is 4063, what is the length of the third side?
    a) 1
    b) 18
    c) 2041
    d) 2040

17) Tom the cat catches a mouse every 12240 seconds. Today he caught his first mouse at 5:00 A.M. He will catch his third mouse at
    a) 11:24 A.M.
    b) 11:48 A.M.
    c) 12:40 P.M.
    d) 3:12 P.M.

21) Yesterday was Jim's crazy shopping day! For every 3 red shirts he bought, he bought 4 yellow shirts and 5 green shirts. He might have bought a total of __?__ red, green, and yellow shirts altogether yesterday.
    a) 30
    b) 40
    c) 50
    d) 120

18) Which of the following is a factor of $1 \times 2 \times 3 \times .... \times 35 \times 36$?
    a) 37
    b) 53
    c) 62
    d) 82

22) Doubling the radius of a circle causes the area of the circle to be multiplied by
    a) 1
    b) 2
    c) 4
    d) 8

19) If a whole number is divisible by 111, then it must be divisible by
    a) 5
    b) 7
    c) 11
    d) 37

23) If Ms. Jackson writes the phrase MATHISTHEBEST on the board 12 times, what is 76th letter that she will write?
    a) E
    b) S
    c) T
    d) H

20) The sides of a right triangle have lengths of 9, 40, and 41. What is the area of the triangle?
    a) 180
    b) 184.5
    c) 360
    d) 820

24) If the length of a side of a square is 1 m, the area of this square is __?__ cm^2
    a) 10^2
    b) 10^4
    c) 10^6
    d) 10^9

25) David loves carrots! Yesterday he ate ½ of his carrots, and today he ate ⅔ of the remaining carrots. He then discovered that he had 12 carrots left. Yesterday he must have started with _?_ carrots.
   a) 36
   b) 48
   c) 60
   d) 72

26) The sum of five consecutive whole numbers is 280. What is the sum of the next five consecutive whole Numbers?
   a) 285
   b) 305
   c) 405
   d) 425

27) If the sum of 2022 different whole numbers is odd, at most how many of the numbers can be even?
   a) 0
   b) 1
   c) 2020
   d) 2021

28) Daisy likes to help her father. She dusts every 3 days, sweeps every 4 days, and cooks dinner every 5 days. If she does all 3 chores on a Sunday, she next does all 3 on the same day on a
   a) Wednesday
   b) Thursday
   c) Friday
   d) Saturday

29) How many whole numbers between 100 and 999 have 8 as the product of their digits?
   a) 8
   b) 9
   c) 10
   d) 11

30) Mr. Book is the accountant for the zoo. He knows that the sum of the two whole numbers that he was supposed to write down is 50, but he can't remember what the numbers are! At least he wrote down the product of the two numbers. Of the following, which could be the product of the two numbers?
   a) 478
   b) 479
   c) 480
   d) 481