1st Score: _____	2nd Score: _____	3rd Score: _____	
Grader: _____	Grader: _____	Grader: _____	**Final Score**

PLACE LABEL BELOW

Name: _____ School: _____

SS/ID Number: _____ City: _____

Grade:　4　5　6　7　8　　　　　　　Classification:　1A　2A　3A　4A　5A　6A

T M S C A   M I D D L E   S C H O O L
N U M B E R   S E N S E
T E S T # 7 ©

J A N U A R Y   1 6 ,   2 0 2 1

GENERAL DIRECTIONS

1. Write only the requested information on this coversheet. Do not make any additional marks on this cover sheet.
2. You will be given 10 minutes to take this test.
3. There are 80 problems on the test.
4. Write in ink only! It would be advantageous to use <u>non-black</u> ink.
5. Solve as many problems as you can in the order that they appear.
6. Problems that are skipped are considered wrong.
7. Problems that appear after the last attempted problem do not count either for or against you.
8. ALL PROBLEMS ARE TO BE SOLVED MENTALLY! [No scratch work!]
9. Only the answer may be written in the answer blank.
10. Starred [*] problems require approximate INTEGRAL answers that are within 5% of the exact answers. All other problems require exact answers.
11. All problems answered correctly are worth <u>FIVE</u> points. <u>FOUR</u> points will be deducted for all problems answered incorrectly or skipped before the last problem attempted.

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(1) $723 + 77 =$ _____

(2) $455 - 460 =$ _____

(3) $48 \times 25 =$ _____

(4) $315 \div 5 =$ _____

(5) $\dfrac{3}{4} =$ _____ (decimal)

(6) $76\% =$ _____ (fraction)

(7) $\dfrac{1}{2} + \dfrac{7}{8} =$ _____ (mixed number)

(8) $6.9 - 4.73 =$ _____ (decimal)

(9) $322\% =$ _____ (decimal)

*(10) $1645 - 603 + 82 =$ _____

(11) $46 \times 66 =$ _____

(12) 40% of 90 less 18 is _____

(13) $99 \times 97 =$ _____

(14) The sum of the prime numbers between 70 and 75 is _____

(15) $4\dfrac{6}{7} \times 4\dfrac{1}{7} =$ _____ (mixed number)

(16) Which is smaller, $\dfrac{6}{7}$ or .875 ? _____

(17) $85 \times 35 =$ _____

(18) $0.575 =$ _____ (fraction)

(19) $46 \times 44 =$ _____

*(20) $376 \times 822 =$ _____

(21) 75% of 72 plus 6 is _____

(22) The LCM of 18 and 27 is _____

(23) $243 \times 13 =$ _____

(24) $0.575757... =$ _____ (fraction)

(25) The cube root of -125 is _____

(26) $\dfrac{5}{8} + \dfrac{5}{16} + \dfrac{5}{32} =$ _____ (mixed number)

(27) If Julie has \$6.25 in quarters, then she has _____ quarters

(28) What is 5.5% tax on \$80.00? \$_____

(29) 90 base 10 = _____ base 8

*(30) $\sqrt{130} \times \sqrt{244} =$ _____

(31) If the perimeter of a square is 88, then the area is _____

(32) Two numbers have a sum of 27, a product of 162, and a positive difference of _____

(33) If 9 ads cost \$12.33, then 12 ads cost \$_____

34) $465 \times 111 =$ _____

(35) $57^2 =$ _____

(36) How many integers between 22 and 122 are divisible by 12? _____

(37) $\dfrac{14}{77}$ of a gallon = _____ in^3

(38) If $3x + 2y = 8$ and $2x - y = 10$, then y = _____

(39) If $7^{5x} = 343$, then x = _____

*(40) 4 miles = _____ yards

(41) $\sqrt[3]{8000} =$ _____

(42) The negative reciprocal of 6.8 is _____

(43) $483796 \div 11$ has a remainder of _____

(44) $50°\,C =$ _____ $°F$

(45) $443_6 - 154_6 =$ _____ $_6$

(46) $\left(\dfrac{8}{7}\right)^2 =$ _____ (mixed number)

(47) $286 \times 63 =$ _____

(48) The sum of the prime divisors of 165 is _____

(49) $S = \{1,3,6,10,15,21,m,n...\}.$ $m + n =$ _____

*(50) $\sqrt[3]{522} \times \sqrt[3]{741} =$ _____

(51) If $f(x) = x^2 - 2x,$ then $f\left(f(3)\right) =$ _____

(52) $(607)^2 =$ _____

(53) $111101110_2 =$ _____ $_8$

(54) The fourth pentagonal number is _____

(55) $150\ mph =$ _____ ft/s

(56) $\dfrac{8!}{5!\,2!} =$ _____

(57) $(31 + 24 \times 16) \div 7$ has a remainder of _____

(58) $\dfrac{11}{18} - \dfrac{32}{55} =$ _____ (fraction)

(59) $8^{-3} + 8^{-1} =$ _____

*(60) $\pi^7 \times e^3 =$ _____

(61) $\dfrac{7}{12} + \dfrac{7}{20} + \dfrac{7}{30} =$ _____ (mixed number)

(62) The sum of the 17th and
18th triangular numbers is _____

(63) The probability of rolling two
dice and getting a sum of 4 or 6 or 8 is _____

(64) $25^2 + 50^2 =$ _____

(65) $12 \times \dfrac{15}{17} =$ _____ (mixed number)

(66) $24 + 8 + \dfrac{8}{3} + \dfrac{8}{9} + \dfrac{8}{27} + ... =$ _____

(67) $18^2 - 23^2 + 28^2 - 33^2 =$ _____

(68) The perimeter of an equilateral
triangle with height $= 9\sqrt{3}$ is _____

(69) $17^3 - 16^3 =$ _____

*(70) $2884 \times 0.714 =$ _____

(71) If $f(x) = \dfrac{6x+6}{5} + 10,$ then $f^{-1}(-2) =$ _____

(72) If $x^2 + y^2 = 117,\ x > y > 0,$ and
both x and y are integers then $x + y =$ _____

(73) The first 4 digits of the decimal for $\dfrac{108}{333}$
is 0._____

(74) The sum of the integral
solutions of $|6x - 12| < 60$ is _____

(75) The smallest angle formed by
The hands of a clock at 7:20 is _____ $°$

(76) The sum of the positive
integral divisors of 20 is _____

(77) $222 \times \dfrac{6}{27} =$ _____ (mixed number)

(78) $833\dfrac{1}{3}\%$ of 18 is _____

(79) If $(3)(7)(13)(74)(k) = 121212,$ then $k =$ ____

*(80) $9 \times 18 \times 27 \times 36 =$ _____

2020-2021 TMSCA MSNS Test 7 Key

(1) 800

(2) −5

(3) 1200

(4) 63

(5) .75

(6) $\dfrac{19}{25}$

(7) $1\dfrac{3}{8}$

(8) 2.17

(9) 3.22

*(10) 1068−1180

(11) 3036

(12) 18

(13) 9603

(14) 144

(15) $20\dfrac{6}{49}$

(16) $\dfrac{6}{7}$

(17) 2975

(18) $\dfrac{23}{40}$

(19) 2024

*(20) 293619-324525

(21) 60

(22) 54

(23) 3159

(24) $\dfrac{19}{33}$

(25) −5

(26) $1\dfrac{3}{32}$

(27) 25

(28) 4.40

(29) 132

*(30) 170−187

(31) 484

(32) 9

(33) 16.44

(34) 51615

(35) 3249

(36) 9

(37) 42

(38) −2

(39) $\dfrac{3}{5}$ or .6

*(40) 6688−7392

(41) 20

(42) $-\dfrac{5}{34}$

(43) 5

(44) 122

(45) 245

(46) $1\dfrac{15}{49}$

(47) 18018

(48) 19

(49) 64

*(50) 70−76

(51) 3

(52) 368449

(53) 756

(54) 22

(55) 220

(56) 168

(57) 2

(58) $\dfrac{29}{990}$

(59) $\dfrac{65}{512}$

*(60) 57632−63697

(61) $1\dfrac{1}{6}$

(62) 324

(63) $\dfrac{13}{36}$

(64) 3125

(65) $10\dfrac{10}{17}$

(66) 36

(67) −510

(68) 54

(69) 817

*(70) 1957−2162

(71) −11

(72) 15

(73) 3243

(74) 38

(75) 100

(76) 42

(77) $49\dfrac{1}{3}$

(78) 150

(79) 6

*(80) 149591-165337