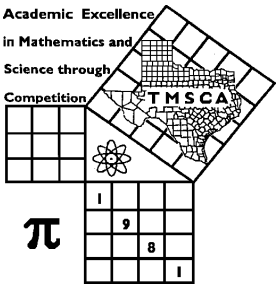
1st Score: _____	2nd Score: _____	3rd Score: _____	
Grader: _____	Grader: _____	Grader: _____	**Final Score**

PLACE LABEL BELOW

Name:_____ School:_____

SS/ID Number:_____ City:_____

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



TMSCA MIDDLE SCHOOL

NUMBER SENSE

TEST#4©

NOVEMBER 13, 2021

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 non-black 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 FIVE points. FOUR points will be deducted for all problems answered incorrectly or skipped before the last problem attempted.

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2021-2022 TMSCA Middle School Number Sense Test 4

(1) $2468 + 7531 =$ _____

(2) $400 - 520 =$ _____

(3) $\frac{4}{7} + \frac{3}{14} =$ _____ (fraction)

(4) $9.6 + 5.77 =$ _____ (decimal)

(5) $46 \times 25 =$ _____

(6) $83\frac{1}{3}\% =$ _____ (fraction)

(7) $4907 \div 0.7 =$ _____

(8) $15 \times 17 - 12 \times 17 =$ _____

(9) $875 \times 11 =$ _____

*(10) $1257 + 1483 + 1619 =$ _____

(11) $17^2 =$ _____

(12) $15 \times 32 =$ _____

(13) $67 \times 73 =$ _____

(14) $4548 \div 9 =$ _____ (mixed number)

(15) $45 \times 65 =$ _____

(16) CCCXXII = _____ (Arabic numeral)

(17) 2 gallons + 2 quarts + 2 pints = _____ pints

(18) $3\frac{3}{7} + 4\frac{3}{8} =$ _____ (mixed number)

(19) The LCM of 15 and 25 is _____

*(20) $67 \times 53 + 88 =$ _____

(21) $0.4666\ldots =$ _____ (fraction)

(22) If $A = \{1, 3, 5, 7, 9\}$ and $B = \{2, 3, 5, 7, 13\}$, then $A \cup B$ has how many elements? _____

(23) $93 \times 92 =$ _____

(24) $\left(\frac{9}{4}\right)^2 =$ _____ (mixed number)

(25) $14^3 =$ _____

(26) Which is larger $\frac{7}{15}$ or $\frac{12}{25}$? _____

(27) If 8 abs cost \$4.50, then 4 abs cost \$_____

(28) $333 \times \frac{6}{37} =$ _____

(29) $343 \times 12 =$ _____

*(30) $29656 \div 488 =$ _____

(31) $16^2 + 48^2 =$ _____

(32) Find the smallest integer k, $k > 0$, such that $k + 7$ is a prime number _____

(33) The additive inverse of 1.8 is _____

(34) The slope of the line $6x - 3y = 8$ is _____

(35) 40% of 70 minus 13 is _____

(36) $|3x - 7| = 25,\ x < 0.\ x =$ _____

(37) $(44 \times 52 - 15) \div 6$ has a remainder of ____

(38) $24745 \div 101 =$ _____

(39) $\frac{24}{55} \div \frac{6}{11} =$ _____ (fraction)

*(40) $\sqrt{972} \times \sqrt{776} =$ _____

(41) GCD(16, 24) × LCM(16, 24) = _____

(42) $403^2 =$ _____

(43) $321_4 =$ _____ $_2$

(44) Round $\sqrt{2}$ to the nearest tenth. _____

(45) $56^2 =$ _____

(46) $(12x+6)^2 = ax^2+bx+c.\ a+b+c =$ _____

(47) 27% of $122\frac{2}{9} =$ _____

(48) If $4x-7=9$, then $3x+8 =$ _____

(49) $\frac{2}{5}\times\frac{7}{8}\times\frac{15}{28} =$ _____ (fraction)

***(50)** $\sqrt[3]{75018} =$ _____

(51) $143\times 56 =$ _____

(52) $98\times 105 =$ _____

(53) $\frac{1}{4}$ mile = _____ feet

(54) $12\times\frac{14}{17} =$ _____ (mixed number)

(55) The 15^{th} triangular number is _____

(56) $0.272727... + 0.333... =$ _____

(57) The sum of all positive integers x such that $2x-13\le -2$ is _____

(58) A dodecahedron has _____ sides

(59) $303^3 =$ _____

***(60)** $17\times 24\times 31 =$ _____

(61) The largest root of $(3x+1)^2 = \frac{1}{9}$ is _____

(62) The probability of rolling a sum of 5 or 9 with two dice is _____

(63) The measure of the interior angle of a regular hexagon is _____°

(64) $432_5 \times 3_5 =$ _____ $_5$

(65) $\frac{1}{4}+\frac{1}{8}+\frac{1}{12} =$ _____ (fraction)

(66) $115^2 =$ _____

(67) If $g(x)=x^2-8x+16$, then $g(25) =$ _____

(68) If $235_b = 124$, then $41_b =$ _____

(69) The first 4 digits of the decimal for $\frac{19}{33}$ is 0._____

***(70)** $25^4 =$ _____

(71) If $x^2+y^2=130$, $x>y>3$ and both x and y are integers, then $x-y =$ _____

(72) Two numbers have a sum of 33, a product of 272, and a positive difference of _____

(73) How many integers between 6 and 72 are divisible by 6? _____

(74) The set $\{a,b,c,d,e,f\}$ has _____ proper subsets.

(75) $27^2-28^2+29^2-30^2 =$ _____

(76) The sum of the prime numbers between 80 and 100 is _____

(77) $4.3777... =$ _____ (mixed number)

(78) $5+7+12+19+31+...+212+343 =$ _____

(79) If 12 painters can paint 3 houses in 4 days, how many days would it take 8 painters to paint 9 houses? _____

***(80)** The volume of a sphere with a radius of 12 in is _____ in^3

2021-2022 TMSCA MSNS Test 4 Key

(1) 9999

(2) -120

(3) $\frac{11}{14}$

(4) 15.37

(5) 1150

(6) $\frac{5}{6}$

(7) 7010

(8) 51

(9) 9625

***(10)** $4142-4576$

(11) 289

(12) 480

(13) 4891

(14) $505\frac{1}{3}$

(15) 2925

(16) 322

(17) 22

(18) $7\frac{45}{56}$

(19) 75

***(20)** $3458-3820$

(21) $\frac{7}{15}$

(22) 7

(23) 8556

(24) $5\frac{1}{16}$

(25) 2744

(26) $\frac{12}{25}$

(27) 2.25

(28) 54

(29) 4116

***(30)** $58-63$

(31) 2560

(32) 4

(33) $-1.8, -1\frac{4}{5}, -\frac{9}{5}$

(34) 2

(35) 15

(36) -6

(37) 5

(38) 245

(39) $\frac{4}{5}$

***(40)** $826-911$

(41) 384

(42) 162409

(43) 111001

(44) 1.4

(45) 3136

(46) 324

(47) 33

(48) 20

(49) $\frac{3}{16}$

***(50)** $41-44$

(51) 8008

(52) 10290

(53) 1320

(54) $9\frac{15}{17}$

(55) 120

(56) $\frac{20}{33}$

(57) 15

(58) 12

(59) 27818127

***(60)** $12016-13280$

(61) $-\frac{2}{9}$

(62) $\frac{2}{9}$

(63) 120

(64) 2401

(65) $\frac{11}{24}$

(66) 13225

(67) 441

(68) 29

(69) 5757

***(70)** $371094-410156$

(71) 2

(72) 1

(73) 10

(74) 63

(75) -114

(76) 269

(77) $4\frac{17}{45}$

(78) 891

(79) 18

***(80)** $6877-7600$