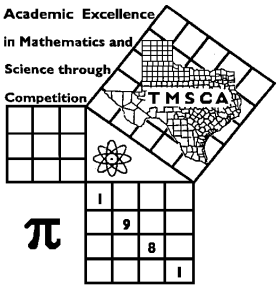
1st Score: _____ Grader: _____	2nd Score: _____ Grader: _____	3rd Score: _____ Grader: _____	**Final Score**

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#2©

OCTOBER 24, 2020

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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2020-2021 TMSCA Middle School Number Sense Test 2

(1) $577 + 298 =$ _____

(2) $2468 - 543 =$ _____

(3) $16^2 =$ _____

(4) $48 \times 15 =$ _____

(5) $\frac{4}{5} =$ _____%

(6) $642 \times 11 =$ _____

(7) $64861 \div 9$ has a remainder of _____

(8) $11.7 - 6.52 =$ _____ (decimal)

(9) $\frac{1}{6} + \frac{1}{9} =$ _____

*(10) $955 + 409 - 250 =$ _____

(11) $37 \times 43 =$ _____

(12) The largest prime divisor of 68 is _____

(13) $95 \times 89 =$ _____

(14) $0.35 =$ _____ (fraction)

(15) $224 \times 12 =$ _____

(16) $75 \times 55 =$ _____

(17) The sum of the prime numbers less than 10 is _____

(18) $\frac{9}{40} =$ _____ (decimal)

(19) MCDLXXVI = _____ (Arabic numeral)

*(20) $68 \times 711 =$ _____

(21) $4\frac{3}{7} \times 7\frac{1}{4} =$ _____ (mixed number)

(22) $0.4888... =$ _____ (fraction)

(23) 45 base 10 = _____ base 5

(24) The simple interest on $300 at 6% for 36 months is $_____

(25) $12 \times 3\frac{1}{6} =$ _____

(26) 1 yd + 1 ft + 1 in = _____ in

(27) The LCM of 30 and 25 is _____

(28) $84 \times 75 =$ _____

(29) Two numbers have a sum of 18, a product of 72, and a positive difference of _____

*(30) $\sqrt{318} \times \sqrt{498} =$ _____

(31) The measure of each interior angle of a regular hexagon is _____°

(32) If $4x - 6 = 14$, then $x^3 =$ _____

(33) $74^2 + 33^2 =$ _____

(34) If $2x + 3y = 17$ and $2x - y = 5$, then $x =$ ____

(35) $(11x + 4)^2 = ax^2 + bx + c$. $a + c =$ _____

(36) $48^2 =$ _____

(37) My car travels 24 miles on one gallon of gas. How far will it travel on 15 gallons? _____mi

(38) A decagon has _____ sides.

(39) $997^2 =$ _____

*(40) $23500 \div 275 =$ _____

(41) The negative reciprocal of 4.6 is _____

(42) $S = \{a, b, c, d, e, \}$ has _____ proper subsets

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(43) The distance between the points $(-4, 3)$ and $(4, -3)$ is _____

(44) The sum of the prime divisors of 30 is _____

(45) $\left(\frac{6}{5}\right)^2 =$ _____ (mixed number)

(46) $11^3 =$ _____

(47) $3\frac{1}{3} - 1\frac{5}{6} =$ _____ (mixed number)

(48) $20 + 12 + 7\frac{1}{5} + 4\frac{8}{25} + 2\frac{74}{125} + \ldots =$ _____

(49) The sum of the solutions to $|3x - 6| = 16$ is __

***(50)** $13^4 =$ _____

(51) $59 \times 101 =$ _____

(52) $108 \times 109 =$ _____

(53) If the diameter of a circle is 38 in, then the area of the circle is $k\pi$ in^2. $k =$ _____

(54) $8^{-1} + 8^{-2} + 8^{-3} =$ _____

(55) $\frac{1}{7}$ of a gallon = _____ cubic inches

(56) If $4^{(x+y)} = 64$, then $(x + y)^4 =$ _____

(57) The third pentagonal number is _____

(58) $\left(2\sqrt{5} \times 3\sqrt{5}\right)^2 =$ _____

(59) $\frac{8!}{5!} \times (6)^{-1} =$ _____

***(60)** $\pi^4 \times e^4 =$ _____

(61) If $f(x) = 2x^2 + 2$, then $f(f(3)) =$ _____

(62) 60 mph = _____ ft/s

(63) $567 \times 111 =$ _____

(64) The sum of the 11th and 12th triangular numbers is _____

(65) $\frac{1}{12} + \frac{1}{20} + \frac{1}{30} =$ _____

(66) $19^2 + 57^2 =$ _____

(67) The harmonic mean of 12 and 15 is _____

(68) $2^3 \times 3^3 \times 5^3 =$ _____

(69) The perimeter of an equilateral triangle with height = $8\sqrt{3}$ is _____

***(70)** $3655 \times 0.42857 =$ _____

(71) Two dice are rolled. What are the odds that a sum of 8 was rolled? _____

(72) $333 \times \frac{2}{27} =$ _____

(73) $(4235_8 \times 11_8) =$ _____$_8$

(74) $4\frac{1}{5} \times 6\frac{2}{3} =$ _____

(75) $143 \times 56 =$ _____

(76) How many distinct 6-letter arrangements can be made from the letters of the word letter? _____

(77) The sum of the positive integral divisors of 36 is _____

(78) $(708)^2 =$ _____

(79) 36% of $233\frac{1}{3}$ is _____

***(80)** $3\frac{1}{4} \times 36888 \div 9 =$ _____

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2020-2021 TMSCA MSNS Test 2 Key

(1) 875

(2) 1925

(3) 256

(4) 720

(5) 80

(6) 7062

(7) 7

(8) 5.18

(9) $\frac{5}{18}$

***(10)** 1059 – 1169

(11) 1591

(12) 17

(13) 8455

(14) $\frac{7}{20}$

(15) 2688

(16) 4125

(17) 17

(18) .225

(19) 1476

***(20)** 45931 – 50765

(21) $32\frac{3}{28}$

(22) $\frac{22}{45}$

(23) 140

(24) 54.00

(25) 38

(26) 49

(27) 150

(28) 6300

(29) 6

***(30)** 379 – 417

(31) 120

(32) 125

(33) 6565

(34) 4

(35) 137

(36) 2304

(37) 360

(38) 10

(39) 994009

***(40)** 82 – 89

(41) $-\frac{5}{23}$

(42) 31

(43) 10

(44) 10

(45) $1\frac{11}{25}$

(46) 1331

(47) $1\frac{1}{2}$

(48) 50

(49) 4

***(50)** 27133 – 29989

(51) 5959

(52) 11772

(53) 361

(54) $\frac{73}{512}$

(55) 33

(56) 81

(57) 12

(58) 900

(59) 56

***(60)** 5053 – 5584

(61) 802

(62) 88

(63) 62937

(64) 144

(65) $\frac{1}{6}$

(66) 3610

(67) $\frac{40}{3}$ **or** $13\frac{1}{3}$

(68) 27000

(69) 48

***(70)** 1489 – 1644

(71) $\frac{5}{31}$

(72) $24\frac{2}{3}$ **or** $\frac{74}{3}$

(73) 46605

(74) 28

(75) 8008

(76) 180

(77) 91

(78) 501264

(79) 84

***(80)** 12655 - 13986

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