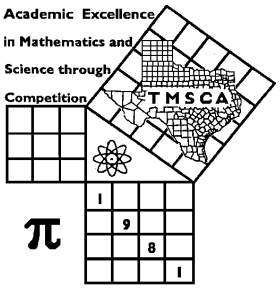
1st Score: _____ Grader: _____	2nd Score: _____ Grader: _____	3rd Score: _____ Grader: _____	**Final Score**

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 #1©

OCTOBER 19, 2024

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 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.
12. **TEST SHOULD FLIP COMPLETELY OVER FOR PROBLEM #1.**

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(43) $993 \times 996 =$ _____

(44) $5^{-1} + 5^{-2} + 5^{-3} =$ _____(fraction)

(45) The reciprocal of $-3.6 =$ _____

(46) $.5333\ldots =$ _____(fraction)

(47) The distance between $(2, 5)$ and $(-7, 8)$ is k, then $k^2 =$ _____

(48) The smaller root of $(2x + 1)^2 = \frac{9}{25}$ is _____

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

***(50)** $\pi^5 + e^4 =$ _____

(51) $45 \times 202 =$ _____

(52) If $\frac{1}{5} - \frac{1}{8} = \frac{1}{x}$, then $x =$ _____

(53) $3367 \times 45 =$ _____

(54) The diagonal of a square is $5\sqrt{2}$, the perimeter of the square is _____

(55) The harmonic mean of 3 and 7 is _____

(56) The measure of an exterior angle of a regular pentagon is _____degrees

(57) The geometric mean of 4, 6, and 9 is _____

(58) $234_5 \times 2_5 =$ _____$_5$

(59) The area of a rectangle with length 17 is 51. The perimeter is _____

***(60)** $\sqrt[3]{52856} =$ _____

(61) In a 30-60-90 degree triangle, the long leg is $13\sqrt{3}$. The hypotenuse is _____

(62) M $=\{4, 2, 6, 8, 14, 22, m, n\}$, $m + n =$ _____

(63) The first four digits of $\frac{7}{30} = 0.$_____

(64) The smallest angle formed by the hands on a clock when it reads 2:40 is_____°

(65) $101 \times 4311 =$ _____

(66) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \frac{1}{15} + 1 =$ _____

(67) When rolling a pair of dice, the probability of obtaining a sum of 10, 11 or 12 is _____

(68) $\frac{5}{8} - \frac{14}{25} =$ _____

(69) $(155)^2 =$ _____

***(70)** $9 \times 18 \times 27 \times 36 =$ _____

(71) The slope of the perpendicular bisector of the line connecting $(5, -2)$ and $(-4, 1)$ is _____

(72) $1 - 4 + 9 - 16 + 25 - 36 =$ _____

(73) The midpoint of the segment joining (2,5) and (7,4) is (a, b), a + b = _____

(74) $(121)^{1.5} =$ _____

(75) The volume of a sphere is 36π cm^3. The surface area is _____π cm^2

(76) If $x = 12, y = 13$, then $x^2 - 2xy + y^2 =$ _____

(77) If $\sqrt[4]{x + 3} - 4 = -2$, $x =$ _____

(78) $0.53777\ldots =$ _____(fraction)

(79) $52_6 =$ _____base 5

***(80)** The volume of a cylinder with diameter of 13 cm and height 7 cm is _____cm^3

2024-2025 TMSCA Middle School Number Sense Test 1

(1) $888 + 88 =$ _____

(2) $101 \times 74 =$ _____

(3) $4 - 2.25 =$ _____

(4) $15 \times 14 =$ _____

(5) $17^2 =$ _____

(6) $265 \times 11 =$ _____

(7) $.53 - .21 + .58 =$ _____

(8) $8484 \div 12 =$ _____

(9) $\frac{17}{15} \times 75 =$ _____

*(10) $589 + 412 + 652 =$ _____

(11) $33\frac{1}{3}\%$ of $72 =$ _____

(12) $63 \times 67 =$ _____

(13) $85 \times 65 =$ _____

(14) The smallest prime number greater than 90 is _____

(15) $-5^3 =$ _____

(16) How many nickels are in $2.75?_____

(17) $2\frac{7}{8} =$ _____(decimal)

(18) The GCF of 18 and 12 is _____

(19) $\frac{3}{8} \div \frac{3}{4} =$ _____

*(20) $2024 \times 55 =$ _____

(21) $35 \times \frac{6}{7} =$ _____

(22) $-40°C =$ _____° F

(23) 2 yards 1 foot = _____inches

(24) $107 \times 96 =$ _____

(25) $13^2 + 39^2 =$ _____

(26) The area of a trapezoid with bases 17 in. and 15 in. and height 8 in. = _____in^2

(27) $6^3 =$ _____

(28) $|5 - 8| + |8 - 5| =$ _____

(29) If the perimeter of a square is 76 cm, the area is _____cm^2

*(30) $\sqrt{12584} =$ _____

(31) Round $\sqrt{3}$ to the nearest tenth _____

(32) $\frac{8!}{6!2!} =$ _____

(33) $582 \times 13 =$ _____

(34) $38_{10} =$ _____$_4$

(35) If $3x + y = 11$ and $2x - y = 9$, then $x =$ _____

(36) $17^2 + 17 =$ _____

(37) If $3x - 5 = 7, x^2 + 15 =$ _____

(38) If $(5x + 6)^2 = ax^2 + bx + c$, then $a + b + c =$ _____

(39) $\frac{7}{33}$ gallons = _____$inches^3$

*(40) $\sqrt[3]{350289} =$ _____

(41) $444 \times \frac{12}{37} =$ _____

(42) How many integers between 35 and 71 are divisible by 7?_____

24-25 TMSCA MSNS Test 1 Key

(1) 976

(2) 7474

(3) 1.75, $\frac{7}{4}$, $1\frac{3}{4}$

(4) 210

(5) 289

(6) 2915

(7) .9 or $\frac{9}{10}$

(8) 707

(9) 85

(10) $1571 - 1735$

(11) 24

(12) 4221

(13) 5525

(14) 97

(15) -125

(16) 55

(17) 2.875

(18) 6

(19) .5 or $\frac{1}{2}$

(20) $105754 - 116886$

(21) 30

(22) -40

(23) 84

(24) 10272

(25) 1690

(26) 128

(27) 216

(28) 6

(29) 361

(30) $107 - 117$

(31) 1.7

(32) 28

(33) 7566

(34) 212

(35) 4

(36) 306

(37) 31

(38) 121

(39) 49

(40) $67 - 74$

(41) 144

(42) 5

(43) 989028

(44) $\frac{31}{125}$

(45) $-\frac{5}{18}$

(46) $\frac{8}{15}$

(47) 90

(48) $-.8, -\frac{4}{5}$

(49) 91

(50) $343 - 378$

(51) 9090

(52) $\frac{40}{3}, 13\frac{1}{3}$

(53) 151515

(54) 20

(55) $\frac{21}{5}, 4\frac{1}{5}, or\ 4.2$

(56) 72

(57) 6

(58) 1023

(59) 40

(60) $36 - 39$

(61) 26

(62) 94

(63) 2333

(64) 160

(65) 435411

(66) $\frac{5}{3}, 1\frac{2}{3}$

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

(68) $\frac{13}{200}$, .065

(69) 24025

(70) $149591 - 165337$

(71) 3

(72) -21

(73) 9

(74) 1331

(75) 36

(76) 1

(77) 13

(78) $\frac{121}{225}$

(79) 112

(80) $883 - 975$