

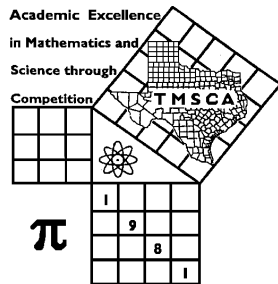
1st Score: _____	2nd Score: _____	3rd Score: _____	Final Score
Grader: _____	Grader: _____	Grader: _____	

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 21, 2023

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.

[illegible]

2023-2024 TMSCA Middle School Number Sense Test 1

(1) $342 \div 6 =$ _____

(2) $50 \times 17 =$ _____

(3) $2023 + 2024 =$ _____

(4) $5656 \div 8$ _____

(5) $87 \times 11 =$ _____

(6) $123456 \div 3$ has a remainder of _____

(7) $\frac{3}{8} + \frac{7}{8} - \frac{1}{2}$ _____ (fraction)

(8) $24 \times 26 =$ _____

(9) 14^2 _____

*(10) $2023 - 2024 + 2025 + 8137 =$ _____

(11) $52\% =$ _____ (fraction)

(12) $103 \times 108 =$ _____

(13) $56 \times 17 + 44 \times 17 =$ _____

(14) The mean of 24, 32 and 4 is _____

(15) $95^2 =$ _____

(16) $\frac{7}{8} + \frac{8}{7} =$ _____ (mixed number)

(17) MCMLXIV = _____ (Arabic number)

(18) $42 \div 1\frac{1}{6} =$ _____

(19) $75 \times 56 =$ _____

*(20) $73 \times 7999 =$ _____

(21) $101 \times 56 =$ _____

(22) $45 \times 16 =$ _____

(23) $10101 \times 53 =$ _____

(24) $143 \times 28 =$ _____

(25) The number of prime numbers
Between 81 and 98 is _____

(26) The GCF of 24 and 36 is _____

(27) The LCM of 24 and 36 is _____

(28) $14\frac{3}{7} \times 14\frac{4}{7} =$ _____ (mixed number)

(29) The perimeter of a regular undecagon with
side length 7.8 cm is _____ cm

*(30) $321 \times 547 =$ _____

(31) The supplement of a 52° angle is _____ $^\circ$

(32) 25.63 dekagrams = _____ decigrams

(33) The 11th triangular number is _____

(34) $5 \times 11 \div 3 + 8 \div 3 =$ _____

(35) The sale price of a \$48 shirt with a 25%
discount is \$ _____

(36) The number of positive
integral divisors of 36 = _____

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

(38) $98 \times 95 =$ _____

(39) $1234 \times 9 + 5 =$ _____

*(40) $2 \times \pi^4 =$ _____

(41) The product of the LCM and GCF
of 111 and 18 = _____

(42) $8\frac{1}{5} \times 7\frac{1}{5} =$ _____ (mixed number)

(43) If $\frac{1}{5} + \frac{2}{3} = \frac{1}{x}$, then $x =$ _____

2023-2024 TMSCA Middle School Number Sense Test 1

(44) $11111^2 =$ _____

(45) Which is greater $\frac{-2}{7}$ or $\frac{-3}{11}$? _____

(46) $\frac{29}{40}$ _____ (decimal %)

(47) $3367 \times 39 =$ _____

(48) $5^4 \times 2^3 =$ _____

(49) $3\frac{1}{7}\%$ = _____ (fraction)

*(50) $142857 \times 17 =$ _____

(51) $12^2 + 24^2 =$ _____

(52) How many terms does
2,5,8,11,...92 have? _____

(53) $31_8 - 17_8$ _____₈

(54) $(6^4 + 9^4) \div 5$ has a remainder of _____

(55) The positive geometric mean
between 4 and 9 = _____

(56) 44 (base 7) + 54 (base 7) = _____ (base 7)

(57) $\sqrt{7\frac{1}{9}} =$ _____

(58) The number of distinct
diagonals that can be drawn
inside a nonagon is _____

(59) If $7! + 8! = m \times 6!$, then $m =$ _____

*(60) The volume of a cube with
edge 35 cm is _____ cm^3

(61) $.3888\ldots =$ _____ (fraction)

(62) If $64^2 - 36^2 = 10k$, then $k =$ _____

(63) $.181818\ldots + .454545\ldots =$ _____

(64) $\frac{1+2+3+\cdots+23}{1+3+5+\cdots+23} =$ _____

(65) If $7^x = 25$, then $7^{x+2} =$ _____

(66) The y-intercept of $3x - 5y = 8$ is _____

(67) If $2x - 7 > 22$, then the smallest integer
solution of x is _____

(68) $12^2 + 84^2 =$ _____

(69) The sum of the roots of
 $f(x) = 3x^2 - 5x + 1$ is _____

*(70) The area of a circle with
circumference of 75 is _____

71) The number of ways to arrange 6
people in a line is _____

(72) 7.5 mph = _____ ft/sec

(73) 4 ft. x 9 ft. x 9 ft. = _____ yards^3

(74) $70169 \div 8$ has a remainder of _____

(75) $36^{1.5} =$ _____

(76) $2023 \div 9 =$ _____ (mixed number)

(77) The sum of the 4th pentagonal
number and the 4th triangular
number is _____

(78) The slope of the line
perpendicular to $5x - 2y = 13$ is _____

(79) If m and n are natural numbers,
and $4\frac{13}{m} \times n\frac{2}{3} = 27$, then $m + n =$ _____

*(80) 54 miles = _____ feet

23-24 TMSCA MSNS Test 1 KEY

(1) 57	(23) 535353	(44) 123454321	(63) $\frac{7}{11}$
(2) 850	(24) 4004	(45) $-\frac{3}{11}$	(64) $\frac{23}{12}$ or $1\frac{11}{12}$
(3) 4047	(25) 3	(46) 72.5	(65) 1225
(4) 707	(26) 12	(47) 131313	(66) $-\frac{8}{5}, -1\frac{3}{5}, -1.6$
(5) 957	(27) 72	(48) 5000	(67) 15
(6) 0	(28) $210\frac{12}{49}$	(49) $\frac{11}{350}$	(68) 7200
(7) $\frac{3}{4}$	(29) 85.8 or $85\frac{4}{5}$ or $\frac{429}{5}$	*(50) $2307141 - 2549997$	(69) $\frac{5}{3}$ or $1\frac{2}{3}$
(8) 624	*(30) $166808 - 184366$	(51) 720	*(70) $426 - 470$
*(10) $9653 - 10669$	(31) 128	(52) 31	(71) 720
(11) $\frac{13}{25}$	(32) 2563	(53) 12	(72) 11
(12) 11124	(33) 66	(54) 2	(73) 12
(13) 1700	(34) 21	(55) 6	(74) 1
(14) 20	(35) 36.00	(56) 131	(75) 216
(15) 9025	(36) 9	(57) $\frac{8}{3}$ or $2\frac{2}{3}$	(76) $224\frac{7}{9}$
(16) $2\frac{1}{56}$	(37) $20\frac{9}{14}$	(58) 27	(77) 32
(17) 1964	(38) 9310	(59) 63	(78) $-\frac{2}{5}$ or $-.4$
(18) 36	(39) 11111	*(60) $40732 - 45018$	(79) 22
(19) 4200	*(40) $186 - 204$	(61) $\frac{7}{18}$	*(80) $270864 - 299376$
*(20) $554731 - 613123$	(41) 1998	(62) 280	
(21) 5656	(42) $59\frac{1}{25}$		
(22) 720	(43) $\frac{15}{13}$ or $1\frac{2}{13}$		