

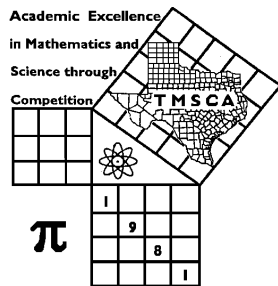
1st Score: _____	2nd Score: _____	3rd Score: _____	Final Score
Grader: _____	Grader: _____	Grader: _____	
Last # Attempted _____	Last # Attempted _____	Last # Attempted _____	

PLACE LABEL BELOW

Name: _____ School: _____

SS/ID Number: _____ City: _____

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



TMSCA MIDDLE SCHOOL NUMBER SENSE STATE TEST © APRIL 1, 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.

2022-2023 TMSCA Middle School Number Sense State Test

- (1) $2023 + 322 =$ _____
- (2) $3.7 + 4.38 =$ _____ (decimal)
- (3) $\frac{2}{3} + \frac{1}{4} =$ _____ (fraction)
- (4) $68 \times 75 =$ _____
- (5) $1215 \div 6 =$ _____ (mixed number)
- (6) $\frac{5}{8} =$ _____ % (mixed number)
- (7) $42 \times 15 =$ _____
- (8) $19 + 24 + 29 =$ _____
- (9) $16(14) + 6(14) - 8(14) =$ _____
- *(10) $752 + 626 + 278 =$ _____
- (11) $83 \times 87 =$ _____
- (12) $93 \times 91 =$ _____
- (13) $36 \times 76 =$ _____
- (14) $56 \times 64 =$ _____
- (15) $0.675 =$ _____ (fraction)
- (16) $107 \times 113 =$ _____
- (17) $5\frac{3}{4} \times 8\frac{3}{5} =$ _____ (mixed number)
- (18) $55 \times 85 =$ _____
- (19) $4\frac{5}{7} \times 4\frac{2}{7} =$ _____ (mixed number)
- *(20) $488 \times 62 =$ _____
- (21) If Juan has \$9.75 in nickels, then he has _____ nickels
- (22) The simple interest on \$1400.00 at 7% interest for 2 years is \$ _____
- (23) The cube root of -3375 is _____
- (24) 5 quarts + 5 pints = _____ ounces
- (25) 13% of 75 is 65% of _____
- (26) $95 \times 102 =$ _____
- (27) $38 \times 25 =$ _____
- (28) 18% of $533\frac{1}{3} =$ _____
- (29) 91 base 10 = _____ base 9
- *(30) $\sqrt{728635} =$ _____
- (31) $92^2 + 11^2 =$ _____
- (32) The slope of the line $3x + 8y = 11$ is _____
- (33) $(8x - 5)^2 = ax^2 + bx + c$. $a + c =$ _____
- (34) The additive inverse of $0.757575\dots$ is _____
- (35) $165^2 =$ _____
- (36) $0.7666\dots =$ _____ (fraction)
- (37) $\frac{16}{21}$ of a gallon = _____ in³
- (38) $429 \times 91 =$ _____
- (39) $48^2 - 36^2 = 6k$. $k =$ _____
- *(40) $\sqrt[3]{138442} =$ _____
- (41) If $f(x) = x^2 - 6x + 9$, then $f(30) =$ _____
- (42) If the distance between the points $(-5, -4)$ and $(2, 3)$ is k , then $k^2 =$ _____

- (43) How many integers between 20 and 60 are divisible by 7? _____
- (44) $357_8 + 753_8 =$ _____₈
- (45) $468 \times 111 =$ _____
- (46) $888 \times \frac{5}{37} =$ _____
- (47) $994^2 =$ _____
- (48) 70 is _____ % of 50
- (49) The product of the coefficients of $(2x + 2y)^2$ is _____
- *(50) $\sqrt{742} \times \sqrt{968} =$ _____
- (51) $909^2 =$ _____
- (52) 264 ft/s = _____ mph
- (53) $14^{-3} + 14^{-2} + 14^{-1} =$ _____
- (54) If $\frac{1}{9} + \frac{1}{11} = \frac{1}{x}$, then $x =$ _____
- (55) $55^\circ \text{C} =$ _____ $^\circ \text{F}$
- (56) $13 \times \frac{21}{25} =$ _____ (mixed number)
- (57) $(2\sqrt{5} \times 3\sqrt{5})^2 =$ _____
- (58) $1008^2 =$ _____
- (59) $(232_6) \div (4_6) =$ _____₆
- *(60) $3\pi^3 \times 3e^3 =$ _____
- (61) If the vertex of the parabola $y = x^2 - 6x + 4$ is (h, k) , then $k =$ _____
- (62) $\frac{8}{15} - \frac{25}{44} =$ _____
- (63) $69375 \div 111 =$ _____
- (64) The sum of the positive integral divisors of 48 is _____
- (65) $29^3 - 30^3 =$ _____
- (66) $666 \times \frac{2}{27} =$ _____ (mixed number)
- (67) The sum of the squares of the roots of $2x^2 - 3x - 9 = 0$ is _____
- (68) The first 4 digits of the decimal for $\frac{13}{15}$ are 0. _____
- (69) $1 - 4 + 9 - 16 + 25 - 36 + \dots + 121 - 144 =$ _____
- *(70) 165 rods = _____ feet
- (71) $60 \times 0.58333\dots =$ _____
- (72) $203^3 =$ _____
- (73) The harmonic mean of the roots of $3x^3 - 30x^2 + 93x - 90 = 0$ is _____
- (74) The sum of the integral solutions of $|5x - 15| \leq 45$ is _____
- (75) $68.75\% =$ _____ (fraction)
- (76) $1^3 + 2^3 + 3^3 + 4^3 + \dots + 10^3 + 11^3 =$ _____
- (77) $5 + 7 + 12 + 19 + 31 + \dots + 212 + 343 =$ _____
- (78) $85\frac{5}{7}\% =$ _____ (fraction)
- (79) If $4\frac{12}{m} \times n\frac{3}{8} = 23$, then $m + n =$ _____
- *(80) Twelve men can paint 15 houses in 16 hours. How long would it take 8 men to paint 200 houses? _____ hr

2022-2023 TMSCA MSNS State Test Key

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|------------------------|--------------------------------|--|---|
| (1) 2345 | (22) 196.00 | (43) 6 | (63) 625 |
| (2) 8.08 | (23) -15 | (44) 1332 | (64) 124 |
| (3) $\frac{11}{12}$ | (24) 240 | (45) 51948 | (65) -2611 |
| (4) 5100 | (25) 15 | (46) 120 | (66) $49\frac{1}{3}$ |
| (5) $202\frac{1}{2}$ | (26) 9690 | (47) 988036 | (67) $\frac{45}{4}, 11\frac{1}{4}, 11.25$ |
| (6) $62\frac{1}{2}$ | (27) 950 | (48) 140 | (68) 8666 |
| (7) 630 | (28) 96 | (49) 128 | (69) -78 |
| (8) 72 | (29) 111 | *(50) 806-889 | *(70) 2587-2858 |
| (9) 196 | *(30) 811-896 | (51) 826281 | (71) 35 |
| *(10) 1574-1738 | (31) 8585 | (52) 180 | (72) 8365427 |
| (11) 7221 | (32) $-\frac{3}{8}$ or $-.375$ | (53) $\frac{211}{2744}$ | (73) $\frac{90}{31}$ or $2\frac{28}{31}$ |
| (12) 8463 | (33) 89 | (54) $\frac{99}{20}, 4\frac{19}{20}, 4.95$ | (74) 57 |
| (13) 2736 | (34) $-\frac{25}{33}$ | (55) 131 | (75) $\frac{11}{16}$ |
| (14) 3584 | (35) 27225 | (56) $10\frac{23}{25}$ | (76) 4356 |
| (15) $\frac{27}{40}$ | (36) $\frac{23}{30}$ | (57) 900 | (77) 891 |
| (16) 12091 | (37) 176 | (58) 1016064 | (78) $\frac{6}{7}$ |
| (17) $49\frac{9}{20}$ | (38) 39039 | (59) 35 | (79) 48 |
| (18) 4675 | (39) 168 | *(60) 5325-5885 | *(80) 304-336 |
| (19) $20\frac{10}{49}$ | *(40) 50-54 | (61) -5 | |
| *(20) 28744-31768 | (41) 729 | (62) $-\frac{23}{660}$ | |
| (21) 195 | (42) 98 | | |