

2022-2023 TMSCA Middle School Number Sense State Test 12

- (1) $1456 + 567 =$ _____
- (2) $7.8 - 3.61 =$ _____ (decimal)
- (3) $\frac{1}{3} + \frac{3}{4} =$ _____ (mixed number)
- (4) $656 \times 11 =$ _____
- (5) $200 \div 9 =$ _____ (mixed number)
- (6) $29 + 33 + 37 =$ _____
- (7) $76\% =$ _____ (fraction)
- (8) $16 \times 75 =$ _____
- (9) $14(12) + 8(12) - 10(12) =$ _____
- *(10) $864 + 688 + 437 =$ _____
- (11) $5\frac{3}{4} \times 8\frac{3}{5} =$ _____ (mixed number)
- (12) $28 \times 88 =$ _____
- (13) $4\frac{5}{7} \times 4\frac{2}{7} =$ _____ (mixed number)
- (14) $46 \times 44 =$ _____
- (15) $92 \times 91 =$ _____
- (16) $77 \times 83 =$ _____
- (17) $0.425 =$ _____ (fraction)
- (18) $108 \times 109 =$ _____
- (19) $35 \times 95 =$ _____
- *(20) $326 \times 58 =$ _____
- (21) The simple interest on \$1500.00 at 6% interest for 3 years is \$ _____
- (22) 2 gallons + 2 quarts = _____ ounces
- (23) $23^2 + 69^2 =$ _____
- (24) If Erik has \$7.85 in nickels, then he has _____ nickels
- (25) $\frac{3}{7} + \frac{3}{14} + \frac{3}{28} =$ _____ (fraction)
- (26) $333 \times 12 =$ _____
- (27) $97 \times 103 =$ _____
- (28) 93 base 10 = _____ base 8
- (29) 15% of $466\frac{2}{3} =$ _____
- *(30) $\sqrt{624578} =$ _____
- (31) The slope of the line $8x + 11y = 9$ is _____
- (32) $(12x + 15)^2 = ax^2 + bx + c$. $a + b + c =$ _____
- (33) $0.5333\dots =$ _____ (fraction)
- (34) If $5^x = 500$, then $5^{x-3} =$ _____
- (35) $155^2 =$ _____
- (36) The additive inverse of $0.575757\dots$ is _____
- (37) $37^2 + 67^2 =$ _____
- (38) $\frac{5}{7}$ of a gallon = _____ in³
- (39) $143 \times 77 =$ _____
- *(40) $\sqrt[3]{68612} =$ _____
- (41) If the distance between the points (2, -4) and (8, 3) is k, then $k^2 =$ _____
- (42) $744_9 + 356_9 =$ _____₉

- (43) $353627 \div 11$ has a remainder of _____
- (44) $49^2 + 49 =$ _____
- (45) $994^2 =$ _____
- (46) The product of the coefficients of $(x - 5y)^2$ is _____
- (47) If $44^2 - 66^2 = 22k$, then $k =$ _____
- (48) $(234_6) \times (5_6) =$ _____₆
- (49) How many integers between 16 and 74 are divisible by 5? _____
- *(50) $\sqrt{647} \times \sqrt{853} =$ _____
- (51) $666 \times \frac{5}{37} =$ _____
- (52) $4 + 10 + 16 + 22 + 28 + \dots + 76 =$ _____
- (53) $19 \times \frac{21}{25} =$ _____ (mixed number)
- (54) $809^2 =$ _____
- (55) $15^{-3} + 15^{-2} =$ _____
- (56) $765_8 =$ _____₂
- (57) $\left(\frac{3}{2}\right)^{-4} =$ _____
- (58) $379 \times 111 =$ _____
- (59) $(542_8) \div (6_8) =$ _____₈
- *(60) $\pi^6 \times e^3 =$ _____
- (61) $\frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} =$ _____
- (62) If the vertex of the parabola $y = x^2 - 4x + 6$ is (h, k) , then $k =$ _____
- (63) If $222_b = 86$, then $111_b =$ _____
- (64) If two dice are rolled, then the probability of obtaining a sum less than 5 is _____
- (65) $444 \times \frac{2}{27} =$ _____ (mixed number)
- (66) The sum of the positive integers x such that $2x - 5 \leq 8$ is _____
- (67) The first 4 digits of the decimal for $\frac{2}{15}$ are 0. _____
- (68) The sum of the positive integral divisors of 45 is _____
- (69) $\frac{12}{13} - \frac{37}{38} =$ _____ (fraction)
- *(70) One week = _____ minutes
- (71) $303^3 =$ _____
- (72) If $(7)(13)(37)(k) = 90909$, then $k =$ _____
- (73) $24 \times 0.41666\dots =$ _____
- (74) If $h(x) = \frac{8x + 20}{12} - 8$, then $h^{-1}(7) =$ _____
- (75) $5 + 3 + 8 + 11 + 19 + \dots + 79 + 128 =$ _____
- (76) $42\frac{6}{7}\% =$ _____ (fraction)
- (77) The first 4 digits of the decimal for $\frac{82}{111}$ is 0. _____
- (78) 44 base 6 is _____ base 5
- (79) If $4\frac{3}{m} \times n\frac{3}{7} = 15$, then $m + n =$ _____
- *(80) The volume of a cone with radius = 8 cm and height = 12 cm is _____ cm^3

22-23 TMSCA MSNS Test 12 Key

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|------------------------|-----------------------|------------------------|------------------------|
| (1) 2023 | (22) 320 | (43) 10 | (63) 43 |
| (2) 4.19 | (23) 5290 | (44) 2450 | (64) $\frac{1}{6}$ |
| (3) $1\frac{1}{12}$ | (24) 157 | (45) 988036 | (65) $32\frac{8}{9}$ |
| (4) 7216 | (25) $\frac{3}{4}$ | (46) -250 | (66) 21 |
| (5) $22\frac{2}{9}$ | (26) 3996 | (47) -110 | (67) 1333 |
| (6) 99 | (27) 9991 | (48) 2102 | (68) 78 |
| (7) $\frac{19}{25}$ | (28) 135 | (49) 11 | (69) $-\frac{25}{494}$ |
| (8) 1200 | (29) 70 | *(50) 706-780 | (70) 9576-10584 |
| (9) 144 | *(30) 751-829 | (51) 90 | (71) 27818127 |
| *(10) 1890-2088 | (31) $-\frac{8}{11}$ | (52) 520 | (72) 27 |
| (11) $49\frac{9}{20}$ | (32) 729 | (53) $15\frac{24}{25}$ | (73) 10 |
| (12) 2464 | (33) $\frac{8}{15}$ | (54) 654481 | (74) 20 |
| (13) $20\frac{10}{49}$ | (34) 4 | (55) $\frac{16}{3375}$ | (75) 332 |
| (14) 2024 | (35) 24025 | (56) 111110101 | (76) $\frac{3}{7}$ |
| (15) 8372 | (36) $-\frac{19}{33}$ | (57) $\frac{16}{81}$ | (77) 7387 |
| (16) 6391 | (37) 5858 | (58) 42069 | (78) 103 |
| (17) $\frac{17}{40}$ | (38) 165 | (59) 73 | (79) 11 |
| (18) 11772 | (39) 11011 | *(60) 18345-20275 | (80) 765-844 |
| (19) 3325 | *(40) 39-42 | (61) $\frac{1}{3}$ | |
| *(20) 17963-19853 | (41) 85 | (62) 2 | |
| (21) 270.00 | (42) 1211 | | |