

2022-2023 TMSCA Middle School Number Sense Test 7

- (1) $468 + 864 =$ _____
- (2) $864 - 884 =$ _____
- (3) $7.88 - 4.77 =$ _____ (decimal)
- (4) $\frac{6}{7} - \frac{3}{14} =$ _____
- (5) $32 \times 25 =$ _____
- (6) $396 \times 11 =$ _____
- (7) $87.5\% =$ _____ (fraction)
- (8) $35 + 40 + 45 =$ _____
- (9) $22^2 =$ _____
- *(10) $756 + 341 - 218 =$ _____
- (11) $45 \times 65 =$ _____
- (12) $64271 \div 9$ has a remainder of _____
- (13) $6\frac{1}{4} \times 8\frac{1}{3} =$ _____ (mixed number)
- (14) 17 is what percent of 40? _____%
- (15) $36 \times 76 =$ _____
- (16) $53 \times 57 =$ _____
- (17) $324 \div 18 =$ _____
- (18) $27^2 + 21 =$ _____
- (19) The largest prime number less than 79 is _____
- *(20) $25.3 \times 247 =$ _____
- (21) $\frac{3}{4} \times \frac{16}{21} =$ _____ (fraction)
- (22) What is 6% tax on \$36.00? \$ _____
- (23) The multiplicative inverse of 4.8 is _____
- (24) $0.393939\dots =$ _____ (fraction)
- (25) The largest prime divisor of 270 is _____
- (26) $91 \times 97 =$ _____
- (27) $\frac{3}{8} + \frac{3}{16} + \frac{3}{32} =$ _____ (fraction)
- (28) 3 gallons + 2 pints = _____ quarts
- (29) $4\frac{3}{8} \times 4\frac{5}{8} =$ _____ (mixed number)
- *(30) $34 \times 21 + 22 \times 36 =$ _____
- (31) If Jake has \$5.85 in nickels, then he has _____ nickels
- (32) $\frac{11}{33}$ of a gallon = _____ in³
- (33) Two positive numbers have a sum of 30, a difference of 10, and a product of _____
- (34) $98 \times 106 =$ _____
- (35) The number of the positive integral divisors of 42 is _____
- (36) 16 is what percent of 20? _____%
- (37) 25% of 42 is 75% of _____
- (38) $\sqrt[3]{1728} =$ _____
- (39) How many integers between 36 and 72 are divisible by 7? _____
- *(40) $57854 \div 80.9 =$ _____
- (41) 72 base 10 = _____ base 9
- (42) $16^2 + 16 =$ _____

- (43) $15 \times 303 =$ _____
- (44) $\frac{9!}{7!2!} =$ _____
- (45) $357_8 + 246_8 =$ _____ $_8$
- (46) $\frac{29}{40}$ _____ (decimal)
- (47) $F = \{3, 7, 10, 17, 27, 44, m, n\}$. $n =$ _____
- (48) $143 \times 91 =$ _____
- (49) The larger root of $(3x - 1)^2 = \frac{16}{25}$ is _____
- *(50) $35.8 \times 610 =$ _____
- (51) If the midpoint of the line segment with endpoints $(-6, 9)$ and $(-3, 10)$ is (a, b) , then $a + b =$ _____
- (52) $777 \times \frac{3}{37} =$ _____
- (53) $212012_3 =$ _____ $_9$
- (54) $75 \text{ mph} =$ _____ ft/s
- (55) $5^{-3} + 5^{-2} + 5^{-1} =$ _____ (fraction)
- (56) $54 \times 1111 =$ _____
- (57) $(155)^2 =$ _____
- (58) $(509)^2 =$ _____
- (59) $(16 + 23 \times 15) \div 9$ has a remainder of _____
- *(60) $\sqrt[3]{36787} =$ _____
- (61) $33 \times \frac{37}{39} =$ _____ (mixed number)
- (62) 12% of $766\frac{2}{3} =$ _____
- (63) The fifth octagonal number is _____
- (64) If $235_b = 124$, then $303_b =$ _____
- (65) $29^2 + 30^2 =$ _____
- (66) If the odds of losing are $\frac{7}{5}$, then the probability of winning is _____
- (67) $38 \times 63 =$ _____
- (68) The sum of the negative integers x such that $4x + 8 \geq -16$ is _____
- (69) The first 4 digits of the decimal for $\frac{107}{495}$ are 0. _____
- *(70) $\pi^5 \times e^5 =$ _____
- 71) The sum of the 33rd triangular number and the 34th triangular number is _____
- (72) $60 \times 0.91666... =$ _____
- (73) $4 + 11 + 18 + 25 + \dots + 74 + 81 =$ _____
- (74) $5.454545... =$ _____ (mixed number)
- (75) If $f(x) = \frac{9x + 10}{5} - 12$, then $f^{-1}(8) =$ _____
- (76) 66 base 8 is _____ base 7
- (77) $22^2 - 20^2 + 18^2 - 16^2 =$ _____
- (78) The volume of a cone is $484\pi \text{ in}^3$. If the diameter is 22 in, then the height is _____ in
- (79) If m and n are natural numbers, and $4\frac{13}{m} \times n\frac{2}{3} = 27$, then $m + n =$ _____
- *(80) My rectangular pool measures 11 ft by 9 ft and is 4 ft deep. If it completely full, it holds _____ gal

22-23 TMSCA MSNS Test 7 Key

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|--|------------------------|--------------------------|----------------------|
| (1) 1332 | (22) 2.16 | (43) 4545 | (63) 65 |
| (2) -20 | (23) $\frac{5}{24}$ | (44) 36 | (64) 150 |
| (3) 3.11 | (24) $\frac{13}{33}$ | (45) 625 | (65) 1741 |
| (4) $\frac{9}{14}$ | (25) 5 | (46) .725 | (66) $\frac{5}{12}$ |
| (5) 800 | (26) 8827 | (47) 115 | (67) 2394 |
| (6) 4356 | (27) $\frac{21}{32}$ | (48) 13013 | (68) -21 |
| (7) $\frac{7}{8}$ | (28) 13 | (49) $\frac{3}{5}$ or .6 | (69) 2161 |
| (8) 120 | (29) $20\frac{15}{64}$ | *(50) 20747-22929 | *(70) 43147-47688 |
| (9) 484 | *(30) 1431-1581 | (51) 5 | (71) 1156 |
| *(10) 836-922 | (31) 117 | (52) 63 | (72) 55 |
| (11) 2925 | (32) 77 | (53) 765 | (73) 510 |
| (12) 2 | (33) 200 | (54) 110 | (74) $5\frac{5}{11}$ |
| (13) $52\frac{1}{12}$ | (34) 10388 | (55) $\frac{31}{125}$ | (75) 10 |
| (14) $42.5, 42\frac{1}{2}, \frac{85}{2}$ | (35) 8 | (56) 59994 | (76) 105 |
| (15) 2736 | (36) 80 | (57) 24025 | (77) 152 |
| (16) 3021 | (37) 14 | (58) 259081 | (78) 12 |
| (17) 18 | (38) 12 | (59) 1 | (79) 22 |
| (18) 750 | (39) 5 | *(60) 32-34 | *(80) 2815-3110 |
| (19) 73 | *(40) 680-750 | (61) $31\frac{4}{13}$ | |
| *(20) 5937-6561 | (41) 80 | (62) 92 | |
| (21) $\frac{4}{7}$ | (42) 272 | | |