

2022-2023 TMSCA Middle School Test 8

- (1) $912 - 591 =$ _____
- (2) $345 + 654 =$ _____
- (3) $7.87 - 2.78 =$ _____ (decimal)
- (4) $93 \times 101 =$ _____
- (5) $\frac{1}{6} + \frac{1}{4} =$ _____ (fraction)
- (6) $125 \times 28 =$ _____
- (7) $44 \times 15 =$ _____
- (8) $\frac{13}{20} =$ _____ (decimal)
- (9) $7(9) + 13(9) - 11(9) =$ _____
- *(10) $1062 + 751 - 95 =$ _____
- (11) $74 \times 66 =$ _____
- (12) 32 is what percent of 50? _____ %
- (13) $3\frac{1}{5} \times 5\frac{1}{3} =$ _____ (mixed number)
- (14) $108 \times 111 =$ _____
- (15) $3\frac{2}{7} + 4\frac{1}{3} =$ _____ (mixed number)
- (16) $95^2 =$ _____
- (17) The mean of 38, 25, 37 and 28 is _____
- (18) 144 inches = _____ yards
- (19) MCDLXX = _____ (Arabic numeral)
- *(20) $91276 \div 298 =$ _____
- (21) $28 \times 2\frac{1}{7} =$ _____
- (22) $222 \times 14 =$ _____
- (23) 44 pints = _____ gallons
- (24) $43 \times 25 =$ _____
- (25) If $5x + 11 = 36$, then $x^2 + 15 =$ _____
- (26) The simple interest on \$900 at 9% for 24 months is \$ _____
- (27) $26^2 + 78^2 =$ _____
- (28) $99 \times 106 =$ _____
- (29) The GCD (20, 35) + LCM (20, 35) = _____
- *(30) $\sqrt{77543} =$ _____
- (31) My car travels 32 miles on one gallon of gas. How far will it travel on 32 gallons? _____ mi
- (32) If the y-intercept of the line $9x + 3y = 7$ is (0, b), then b = _____
- (33) If $3^x = \frac{1}{243}$, then x = _____
- (34) 99 in base 10 = _____ base 5
- (35) $(21x + 6)^2 = ax^2 + bx + c$. $a + b + c =$ _____
- (36) $55 \times 75 =$ _____ (decimal)
- (37) $0.121212\dots =$ _____ (fraction)
- (38) $47^2 =$ _____
- (39) $\frac{5!}{7!} =$ _____ (fraction)
- *(40) $\sqrt[3]{72358} =$ _____
- (41) 0.025 = _____ (fraction)
- (42) $429 \times 77 =$ _____

- (43) The volume of cube is 1331 cm^3 .
The total surface area of the cube is _____ cm^2
- (44) How many integers between 43 and 75 are divisible by 6? _____
- (45) $T = \{1, 3, 6, 10, 15, 21, \dots, b, 78\}$. $b =$ _____
- (46) If the area of a rectangle with length = 19 is 114, then the perimeter = _____
- (47) $131^\circ\text{F} =$ _____ $^\circ\text{C}$
- (48) $444 \times \frac{8}{37} =$ _____
- (49) $992 \times 997 =$ _____
- *(50) $\sqrt{244} \times \sqrt{686} =$ _____
- (51) $(808)^2 =$ _____
- (52) $(202)^3 =$ _____
- (53) $1005 \times 1008 =$ _____
- (54) $\frac{8!}{5!} \times (7)^{-1} =$ _____
- (55) $(441_7) \div (5_7) =$ _____ $_7$
- (56) $(3\sqrt{3} \times 5\sqrt{3})^2 =$ _____
- (57) $0.454545\dots + 0.111\dots =$ _____
- (58) $77\frac{7}{9}\%$ of 63 = _____
- (59) If $6^{(x+y)} = 1296$, then $(x+y)^3 =$ _____
- *(60) $4\pi^4 \times e^2 =$ _____
- (61) $12^3 - 28 =$ _____
- (62) The smallest palindrome greater than 415 is _____
- (63) The distance between the points is (1, -6) and (7, 3) is k. $k^2 =$ _____
- (64) The sum of three consecutive odd integers is 141. The smallest of these is _____
- (65) The area of an isosceles trapezoid with a height of 12 and base lengths of 10 and 14 is _____
- (66) If the probability that Alabama can beat Georgia is 0.54, then the odds that Georgia can beat Alabama are _____
- (67) $333 \times \frac{8}{27} =$ _____
- (68) If $43^2 - 47^2 = 36k$, then $k =$ _____
- (69) $35^2 + 36^2 =$ _____
- *(70) $11 \times 15 \times 19 =$ _____
- (71) A string 2 yd, 1 ft, 6 in long is cut into 6 equal pieces. How long is each piece? _____ in
- (72) $1^3 + 2^3 + 3^3 + 4^3 + 5^3 + 6^3 + 7^3 =$ _____
- (73) The arithmetic sequence 3, 9, 15, 21, ..., 99 has _____ terms
- (74) The sum of the integral solutions of $|2x + 8| \leq 22$ is _____
- (75) $(7531_8 \times 11_8) =$ _____ $_8$
- (76) The first 4 digits of the decimal for $\frac{89}{330}$ is 0. _____
- (77) 63 base 7 = _____ base 5
- (78) The sum of the positive integral divisors of 44 is _____
- (79) The 39th triangular number is _____
- *(80) 9 miles = _____ ft

22-23 TMSCA MSNS Test 8 Key

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|-----------------------|--|----------------------|---|
| (1) 321 | (22) 3108 | (43) 726 | (63) 117 |
| (2) 999 | (23) $\frac{11}{2}, 5\frac{1}{2}, 5.5$ | (44) 5 | (64) 45 |
| (3) 5.09 | (24) 1075 | (45) 66 | (65) 144 |
| (4) 9393 | (25) 40 | (46) 50 | (66) $\frac{23}{27}$ |
| (5) $\frac{5}{12}$ | (26) 162.00 | (47) 55 | (67) $98\frac{2}{3}$ or $\frac{296}{3}$ |
| (6) 3500 | (27) 6760 | (48) 96 | (68) -10 |
| (7) 660 | (28) 10494 | (49) 989024 | (69) 2521 |
| (8) .65 | (29) 145 | *(50) 389-429 | (70) 2979-3291 |
| (9) 81 | *(30) 265-292 | (51) 652864 | (71) 15 |
| *(10) 1633-1803 | (31) 1024 | (52) 8242408 | (72) 784 |
| (11) 4884 | (32) $\frac{7}{3}$ or $2\frac{1}{3}$ | (53) 1013040 | (73) 17 |
| (12) 64 | (33) -5 | (54) 48 | (74) -92 |
| (13) $17\frac{1}{15}$ | (34) 344 | (55) 63 | (75) 105041 |
| (14) 11988 | (35) 729 | (56) 2025 | (76) 2696 |
| (15) $7\frac{13}{21}$ | (36) 4125 | (57) $\frac{56}{99}$ | (77) 140 |
| (16) 9025 | (37) $\frac{4}{33}$ | (58) 49 | (78) 84 |
| (17) 32 | (38) 2209 | (59) 64 | (79) 780 |
| (18) 4 | (39) $\frac{1}{42}$ | *(60) 2736-3022 | (80) 45144-49896 |
| (19) 1470 | *(40) 40-43 | (61) 1700 | |
| *(20) 291-321 | (41) $\frac{1}{40}$ | (62) 424 | |
| (21) 60 | (42) 33033 | | |