

2022-2023 TMSCA Middle School Test 11

- (1) $566 - 77 =$ _____
- (2) $654 + 456 =$ _____
- (3) $28 \times 25 =$ _____
- (4) $424\% =$ _____ (mixed number)
- (5) $\frac{6}{7} - \frac{3}{4} =$ _____ (fraction)
- (6) $3514 \div 7 =$ _____
- (7) $\frac{5}{8} =$ _____ % (mixed number)
- (8) $40 \times 15 =$ _____
- (9) $5 \times 24 + 26 \times 5 =$ _____
- *(10) $1483 + 518 + 96 =$ _____
- (11) $66\frac{2}{3}\%$ of 63 is _____
- (12) 70% of 80 plus 14 is _____
- (13) $75^2 =$ _____
- (14) $105 \times 112 =$ _____
- (15) $36 \times 34 =$ _____
- (16) $\frac{17}{40} =$ _____ (decimal)
- (17) The largest prime number less than 70 is _____
- (18) $\frac{15}{16} \times \frac{8}{25} =$ _____ (fraction)
- (19) The additive inverse of -17 is _____
- *(20) $55 \times 888 =$ _____
- (21) $7\frac{2}{3} \times 7\frac{1}{3} =$ _____ (mixed number)
- (22) What is 8% tax on \$45.00? \$ _____
- (23) $286 \times 49 =$ _____
- (24) $4\frac{1}{5} - 1\frac{1}{4} =$ _____ (mixed number)
- (25) $322 \times 12 =$ _____
- (26) $0.727272\dots =$ _____ (fraction)
- (27) 222 base 4 = _____ base 10
- (28) $53^2 =$ _____
- (29) $12^3 =$ _____
- *(30) $28474 \div 71 =$ _____
- (31) $\frac{7}{10} + \frac{10}{7} =$ _____ (mixed number)
- (32) If $4^{8x} = 256$, then $x =$ _____
- (33) $|2 - 11| + 9 + |12 - 3| =$ _____
- (34) If $x + 2y = 6$ and $2x - y = 7$, then $y =$ _____
- (35) How many integers between 40 and 100 are divisible by 11? _____
- (36) $282 \times 111 =$ _____
- (37) $\frac{10}{11}$ of a gallon = _____ in³
- (38) Two numbers have a sum of 25, a product of 126, and a positive difference of _____
- (39) $40^\circ \text{C} =$ _____ $^\circ\text{F}$
- *(40) 1368 inches = _____ yards
- (41) The sum of the prime divisors of 105 is _____
- (42) $27^2 - 29 =$ _____

- (43) The product of the roots of $3x^3 + 6x^2 - 3x - 6 = 0$ is _____
- (44) $A = \{5, 9, 14, 23, 37, a, b, 157, \dots\}$. $b =$ _____
- (45) The sum of the roots of $3x^3 + 6x^2 - 3x - 6 = 0$ is _____
- (46) $\left(\frac{8}{7}\right)^2 =$ _____ (mixed number)
- (47) $554_9 - 365_9 =$ _____
- (48) The negative reciprocal of 7.4 is _____
- (49) The sum of the prime divisors of 78 is _____
- *(50) $\sqrt{629} \times \sqrt{788} =$ _____
- (51) $(608)^2 =$ _____
- (52) $5! + 3! + 2! + 1! + 0! =$ _____
- (53) $154 \text{ ft/s} =$ _____ mph
- (54) If $f(x) = x^3 - x$, then $f(f(2)) =$ _____
- (55) The perimeter of an equilateral triangle with height $= 12\sqrt{3}$ is _____
- (56) If $44^2 - 41^2 = 17k$, then $k =$ _____
- (57) $(15 \times 18 + 10 \times 24) \div 6$ has a remainder of _____
- (58) The seventh hexagonal number is _____
- (59) $5^{-2} + 5^{-1} + 5^0 =$ _____ (mixed number)
- *(60) $(.777)(2804) =$ _____
- (61) The volume of a 6 in by 8 in by 10 in rectangular prism is _____ in^3
- (62) The probability of rolling two dice and getting a sum of 5 or 9 is _____
- (63) $4 + 9 + 14 + 19 + 24 + \dots + 64 + 69 =$ _____
- (64) $\left(\sqrt[3]{2197}\right)^2 =$ _____
- (65) $7 \times \frac{11}{15} =$ _____ (mixed number)
- (66) $15^3 - 16^3 =$ _____
- (67) $18^2 + 36^2 =$ _____
- (68) $28^2 - 26^2 + 24^2 - 22^2 =$ _____
- (69) $333 \times \frac{5}{27} =$ _____ (mixed number)
- *(70) $\pi^7 \div 3 =$ _____
- (71) $(9)^{-3} =$ _____
- (72) $\sqrt[3]{59319} =$ _____
- (73) $833\frac{1}{3}\%$ of 42 is _____
- (74) The sum of the positive integral divisors of 54 is _____
- (75) If the area of a circle is 169π cm, then the circumference is _____ π cm.
- (76) The sum of the integral solutions of $|4x - 16| < 48$ is _____
- (77) If $x^2 + y^2 = 130$, $x > y > 3$, and both x and y are integers then $x + y =$ _____
- (78) The first 4 digits of the decimal for $\frac{101}{111}$ are 0. _____
- (79) $36 + 12 + 4 + \frac{4}{3} + \frac{4}{9} + \dots =$ _____
- *(80) The number of seconds in one day is _____

22-23 TMSCA MSNS Test 11 Key

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|----------------------|--------------------------|-----------------------|----------------------|
| (1) 489 | (22) 3.60 | (43) 2 | (63) 511 |
| (2) 1110 | (23) 14014 | (44) 97 | (64) 169 |
| (3) 700 | (24) $2\frac{19}{20}$ | (45) -2 | (65) $5\frac{2}{15}$ |
| (4) $4\frac{6}{25}$ | (25) 3864 | (46) $1\frac{15}{49}$ | (66) -721 |
| (5) $\frac{3}{28}$ | (26) $\frac{8}{11}$ | (47) 178 | (67) 1620 |
| (6) 502 | (27) 42 | (48) $-\frac{5}{37}$ | (68) 200 |
| (7) $62\frac{1}{2}$ | (28) 2809 | (49) 18 | (69) $61\frac{2}{3}$ |
| (8) 600 | (29) 1728 | *(50) 669-739 | |
| (9) 250 | *(30) 381-421 | (51) 369664 | *(70) 957-1057 |
| *(10) 1993-2201 | (31) $2\frac{9}{70}$ | (52) 130 | (71) $\frac{1}{729}$ |
| (11) 42 | (32) $\frac{1}{2}$ or .5 | (53) 105 | (72) 39 |
| (12) 70 | (33) 27 | (54) 210 | (73) 350 |
| (13) 5625 | (34) 1 | (55) 72 | (74) 120 |
| (14) 11760 | (35) 6 | (56) 15 | (75) 26 |
| (15) 1224 | (36) 31302 | (57) 0 | (76) 92 |
| (16) .425 | (37) 210 | (58) 91 | (77) 16 |
| (17) 67 | (38) 11 | (59) $1\frac{6}{25}$ | (78) 9099 |
| (18) $\frac{3}{10}$ | (39) 104 | *(60) 2070-2287 | (79) 54 |
| (19) 17 | *(40) 37-39 | (61) 480 | |
| *(20) 46398-51282 | (41) 15 | (62) $\frac{2}{9}$ | *(80) 82080-90720 |
| (21) $56\frac{2}{9}$ | (42) 700 | | |