

1st Score: _____	2nd Score: _____	3rd Score: _____	Final Score
Grader: _____	Grader: _____	Grader: _____	
PLACE LABEL BELOW			
Name: _____ School: _____			
SS/ID Number: _____ City: _____			
Grade: 4 5 6 7 8 Classification: 1A 2A 3A 4A 5A 6A			



TMSCA MIDDLE SCHOOL NUMBER SENSE

TEST #9 ©

JANUARY 30, 2021

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.

[illegible]

2020-2021 TMSCA Middle School Number Sense Test 9

(1) $143 - 104 =$ _____

(2) $188 + 502 =$ _____

(3) $22\% =$ _____ (fraction)

(4) $15 + 20 + 25 =$ _____

(5) $88 \times 75 =$ _____

(6) $37.5\% =$ _____ (fraction)

(7) $2812 \div 4 =$ _____

(8) $18 \div 3 + 3 \times 6 =$ _____

(9) $\frac{7}{12} - \frac{1}{3} =$ _____ (fraction)

*(10) $452 + 326 - 69 =$ _____

(11) $35 \div 0.05 =$ _____

(12) $12^2 + 4^2 =$ _____

(13) 90% of 40 less 30 is _____

(14) $2\frac{2}{5} + 4\frac{1}{2} =$ _____ (mixed number)

(15) $27 \times 87 =$ _____

(16) 65% of 60 is _____

(17) $\frac{6}{13} \div \frac{24}{39} =$ _____ (fraction)

(18) The GCF of 30 and 75 is _____

(19) The largest prime number less than 67 is _____

*(20) $466 \times 631 =$ _____

(21) $88 \times 97 =$ _____

(22) $37 \times 25 =$ _____

(23) An angle complementary to 73° measures _____ $^\circ$

(24) 5 quarts = _____ ounces

(25) $|4 - 9| + |6 - 12| =$ _____

(26) If $A = \{1, 2, 3, 4, 5\}$ and $B = \{1, 3, 5, 7, 9\}$, then $A \cup B$ has how many elements? _____

(27) The cube root of -729 is _____

(28) $108 \times 111 =$ _____

(29) $\frac{10}{13} + \frac{13}{10} =$ _____ (mixed number)

*(30) $34 \times 26 + 35 \times 25 =$ _____

(31) $142 \times 14 =$ _____

(32) If Carol has \$4.65 in nickels, then she has _____ nickels

(33) If $f(x) = x^2 - 4x + 4$, then $f(17) =$ _____

34) 15 is what percent of 12? _____%

(35) $\frac{12}{33}$ of a gallon = _____ in³

(36) An undecagon has _____ sides

(37) If the perimeter of a square is 68, then the area is _____

(38) 15% of 35 is 25% of _____

(39) The number of the positive integral divisors of 75 is _____

*(40) $625 \times 58 =$ _____

(41) $(5x - 3)^2 = ax^2 + bx + c$. $a + b =$ _____

(42) $\sqrt[3]{2744} =$ _____

- (43) The distance between the points $(8, -6)$ and $(5, -2)$ is _____
- (44) $143 \times 77 =$ _____
- (45) The total surface area of a cube with edge = 7 cm is _____ cm^2
- (46) The measure of an exterior angle of a regular pentagon is _____ $^\circ$
- (47) $992 \times 995 =$ _____
- (48) The volume of a cylinder with radius = 8 m and height = 5 m is _____ $\pi \text{ m}^3$
- (49) $246_9 + 544_9 =$ _____ $_9$
- *(50) $22 \times 30 \times 38 =$ _____
- (51) The slope of a line containing the points $(-2, 4)$ and $(2, -8)$ is _____
- (52) $6\frac{3}{7} \times 7\frac{5}{6} =$ _____ (mixed number)
- (53) $(16 + 23 \times 15) \div 11$ has a remainder of _____
- (54) The probability of rolling a die and obtaining a prime number is _____
- (55) $9657 \div 111 =$ _____
- (56) The sum of the proper factors of 24 is _____
- (57) $1013 \times 1007 =$ _____
- (58) $0.0696969\dots =$ _____ (fraction)
- (59) $9\% \text{ of } 766\frac{2}{3} =$ _____
- *(60) $13^4 \times 17 \div 13^2 =$ _____
- (61) If $3^{x+3} = 162$, then $3^x =$ _____
- (62) The sixth hexagonal number is _____
- (63) If the vertex of the parabola $y = x^2 - 6x + 4$ is (h, k) , then $k =$ _____
- (64) $53 \times 47 + 9 =$ _____
- (65) If $43^2 - 27^2 = 35 \times k$, then $k =$ _____
- (66) 45% of 60 minus 15% of 80 is _____
- (67) The area of an isosceles trapezoid with a height of 12 and base lengths of 15 and 20 is _____
- (68) $38 \times \frac{41}{45} =$ _____ (mixed number)
- (69) The first 4 digits of the decimal for $\frac{19}{30}$ is 0. _____
- *(70) $25^4 =$ _____
- (71) $3^3 + 4^3 + 5^3 + 6^3 =$ _____
- (72) $\left(\frac{81}{625}\right)^{\frac{3}{4}} =$ _____ (fraction)
- (73) $12^8 \div 14$ has a remainder of _____
- (74) If $f(x) = 5x - 7$, then $f(f(5)) =$ _____
- (75) $42 + 28 + 18\frac{2}{3} + 12\frac{4}{9} + 8\frac{8}{27} + \dots =$ _____
- (76) The smallest angle formed by the hands of a clock at 5:10 is _____ $^\circ$
- (77) $\frac{4}{15} + \frac{4}{35} + \frac{4}{63} =$ _____
- (78) 55 base 7 is _____ base 6
- (79) $(26)(37)(42) =$ _____
- *(80) $\sqrt{1302} \times \sqrt[3]{1302} =$ _____

2020-2021 TMSCA MSNS Tet 9 Key

(1) 39	(22) 925	(43) 5	(63) -5
(2) 690	(23) 17	(44) 11011	(64) 2500
(3) $\frac{11}{50}$	(24) 160	(45) 294	(65) 32
(4) 60	(25) 11	(46) 72	(66) 15
(5) 6600	(26) 7	(47) 987040	(67) 210
(6) $\frac{3}{8}$	(27) -9	(48) 320	(68) $34\frac{28}{45}$
(7) 703	(28) 11988	(49) 801	(69) 6333
(8) 24	(29) $2\frac{9}{130}$	*(50) 23826-26334	*(70) 371094-410156
(9) $\frac{1}{4}$	*(30) 1672-1846	(51) -3	(71) 432
*(10) 674-744	(31) 1988	(52) $50\frac{5}{14}$	(72) $\frac{27}{125}$
(11) 700	(32) 93	(53) 9	(73) 4
(12) 160	(33) 225	(54) $\frac{1}{2}$ or .5	(74) 83
(13) 6	(34) 125	(55) 87	(75) 126
(14) $6\frac{9}{10}$	(35) 84	(56) 36	(76) 95
(15) 2349	(36) 11	(57) 1020091	(77) $\frac{4}{9}$
(16) 39	(37) 289	(58) $\frac{23}{330}$	(78) 104
(17) $\frac{3}{4}$	(38) 21	(59) 69	(79) 40404
(18) 15	(39) 6	*(60) 2730-3016	*(80) 375-413
(19) 61	*(40) 34438-38062	(61) 6	
*(20) 279344-308748	(41) -5	(62) 66	
(21) 8536	(42) 14		