

1st Score: _____	2nd Score: _____	3rd Score: _____	Final Score
Grader: _____	Grader: _____	Grader: _____	

PLACE LABEL BELOW

Name: _____ School: _____

SS/ID Number: _____ City: _____

Grade: 5 6 7 8 Classification: 1A 2A 3A 4A 5A 6A



**TMSCA MIDDLE SCHOOL
NUMBER SENSE
KICK-OFF MEET ©
2018-2019**

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]

2018-2019 TMSCA Middle School Number Sense Kickoff Test

- (1) $234 + 342 + 423 =$ _____
- (2) $63 \times 7 =$ _____
- (3) $932 - 239 =$ _____
- (4) $425 \div 25 =$ _____
- (5) $25 \times 83 =$ _____
- (6) $0.375 =$ _____ (fraction)
- (7) $75321 \div 8$ has a remainder of _____
- (8) $11 + 12 + 13 + 14 + 15 + 16 + 17 =$ _____
- (9) $\frac{37}{5} =$ _____ (decimal)
- *(10) $233 \times 2019 =$ _____
- (11) $29 \times 21 =$ _____
- (12) $97 \div 3 =$ _____ (mixed number)
- (13) $111 \div 3 \times 27 =$ _____
- (14) $23 \times 14 + 23 \times 9 =$ _____
- (15) $26^2 =$ _____
- (16) $33 \times 73 =$ _____
- (17) $\frac{14 \times 16 \times 30}{7 \times 4 \times 5} =$ _____
- (18) $12.5 \times 104 =$ _____
- (19) $1 + 3 + 5 + \dots + 33 =$ _____
- *(20) $891 \times 959 =$ _____
- (21) $11\frac{1}{2} + 14\frac{2}{3} =$ _____ (mixed number)
- (22) The arithmetic mean of 11, 23, and _____ is 23
- (23) $93 \times 99 =$ _____
- (24) 2019 quarts = _____ gallons (decimal)
- (25) The sum of the distinct prime divisors of 88 is _____
- (26) The product of 5.5 and its additive inverse is _____ (decimal)
- (27) Find the GCD of 14 and 40. _____
- (28) Find the LCM of 14 and 40. _____
- (29) $118 \times 122 =$ _____
- *(30) 2019 yards = _____ inches
- (31) If a \$90.00 football jersey is on sale for 30% off, then the football jersey will cost \$ _____
- (32) 95 has how many positive integral divisors? _____
- (33) In the set 11, 15, 21, 31, x, the sum of the range and the median is 51. x = _____
- (34) $1\frac{8}{11} + \frac{11}{8} =$ _____ (mixed number)
- (35) $83^2 - 17^2 =$ _____
- (36) $101 \times 783 =$ _____
- (37) The perimeter of a regular pentagon with side $2\frac{3}{7}$ is _____ (mixed number)
- (38) $3240 = 18^2 + x^2$, where $x > 0$, x = _____
- (39) $2 + 4 + 6 + \dots + 48 = 12k$, k = _____
- *(40) $66\frac{2}{3} \times 2379 =$ _____
- (41) The area of a rhombus with diagonals 12 and 42 is _____
- (42) $700 = 21 \times 33 +$ _____

- (43) A pentagon has _____ distinct diagonals
- (44) $\sqrt{5329} =$ _____
- (45) Find the sum of the measure of the interior angles of a heptagon. _____ °
- (46) $133 \times 137 =$ _____
- (47) How many subsets of $\{a, r, m, y, k, n, i, g, h, t\}$ have exactly 3 elements? _____
- (48) Find the number of sides of a regular polygon with exterior angle of 40° . _____
- (49) $73_9 =$ _____₁₀
- *(50) $17 \times 18 \times 19 =$ _____
- (51) $25 \times \frac{25}{22} =$ _____ (mixed number)
- (52) $1234567 \div 11$ has a remainder of _____
- (53) $4 \times 5 \times 6 \times 7 + 1 = k^2$, $k > 0$. $k =$ _____
- (54) If the slope of a line is 1.5 which passes through (4, 7) and (8, k), find the value of k. _____
- (55) $8\frac{2}{3} \times 10\frac{2}{3} =$ _____ (mixed number)
- (56) $143_8 \div 3_8 =$ _____₈
- (57) If b, 12, c, ... forms a geometric sequence, then bc = _____
- (58) $\sqrt[3]{3\frac{3}{8}} =$ _____ (mixed number)
- (59) $23^2 - 16^2 = 13x$. $x =$ _____
- *(60) $\sqrt{94318} =$ _____
- (61) If $f(x) = mx + b$ and $f(13) - f(7) = 90$, then $m =$ _____
- (62) $0.484848... =$ _____ (fraction)
- (63) $2^2 \times 3^3 \times 5^7$ has _____ positive integral divisors
- (64) Find the 8th hexagonal number. _____
- (65) The x^2 coefficient of $(4x^2 + 7x + 3)(2x - 5)$ is _____
- (66) The probability of getting a sum of 5 when rolling a pair of dice is _____
- (67) $(7\sqrt{11})^2 =$ _____
- (68) If $x^2 - 23x + 60 = (x - p)(x - q)$, where p and q are real numbers and $p < q$, then $p =$ _____
- (69) The area 30 – 60 – 90 right triangle with a hypotenuse of 16 is $k\sqrt{3}$, $k =$ _____
- *(70) $45^4 =$ _____
- (71) P and Q are the roots of $2x^2 - 4x - 5 = 0$. $PQ + P + Q =$ _____
- (72) The axis of symmetry of $f(x) = (3x - 5)(x - 4)$ is $x =$ _____
- (73) The y-intercept of $f(x) = (3x - 5)(x - 4)$ is _____
- (74) If $f(x)$ is a parabola with vertex (7, 5), then $2f(x - 4) + 7$ has vertex (h, k). $k =$ _____
- (75) $\sqrt{\frac{9!}{7!}} + 9 =$ _____
- (76) If there are 8 red marbles and G green marbles in a bag and the probability of drawing a green marble is 0.6, then $G =$ _____
- (77) The sum of the roots of $|x - 9| - 5 = 0$ is _____
- (78) In an isosceles trapezoid with bases 16 and 28 and height 8, find the length of one of the two equal sides. _____
- (79) $208^2 =$ _____
- *(80) $2.9 \times \pi \times 81 =$ _____

2018-2019 TMSCA Middle School Kick-Off Online Meet Number Sense Key

(1) 999	(23) 9207	(43) 5	(63) 96
(2) 441	(24) 504.75	(44) 73	(64) 120
(3) 693	(25) 13	(45) 900	(65) - 6
(4) 17	(26) - 30.25	(46) 18221	(66) $\frac{1}{9}$
(5) 2075	(27) 2	(47) 120	(67) 539
(6) $\frac{3}{8}$	(28) 280	(48) 9	(68) 3
(7) 1	(29) 14396	(49) 66	(69) 32
(8) 98	*(30) 69050 - 76318	*(50) 5524 - 6104	*(70) 3895594 - 4305656
(9) 7.4	(31) 63.00	(51) $28\frac{9}{22}$	(71) $-\frac{1}{2}$ or $-.5$
*(10) 446906 - 493948	(32) 4	(52) 4	(72) $\frac{17}{6}$ or $2\frac{5}{6}$
(11) 609	(33) 41	(53) 29	(73) 20
(12) $32\frac{1}{3}$	(34) $3\frac{9}{88}$	(54) 13	(74) 17
(13) 999	(35) 6600	(55) $92\frac{4}{9}$	(75) 9
(14) 529	(36) 79083	(56) 41	(76) 12
(15) 676	(37) $12\frac{1}{7}$	(57) 144	(77) 18
(16) 2409	(38) 54	(58) $1\frac{1}{2}$	(78) 10
(17) 48	(39) 50	(59) 21	(79) 43264
(18) 1300	*(40) 150670 - 166530	*(60) 292 - 322	*(80) 702 - 774
(19) 289	(41) 252	(61) 15	
*(20) 811746 - 897192	(42) 7	(62) $\frac{16}{33}$	
(21) $26\frac{1}{6}$			
(22) 35			