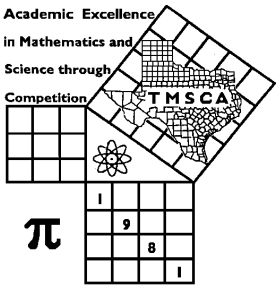
1st Score: _____ Grader: _____	2nd Score: _____ Grader: _____	3rd Score: _____ Grader: _____	**Final Score**

PLACE LABEL BELOW

Name:_____ School:_____

SS/ID Number:_____ City:_____

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



TMSCA ELEMENTARY NUMBER SENSE STATE MEET TEST © 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.

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Texas Math and Science Coaches Association
2020 – 2021 Elementary Number Sense Test Online State

Contestant's Number _____

Final	_____	_____
2nd	_____	_____
1st	_____	_____
	Score	**Initials**

Read Directions Carefully Before Beginning Test

Do Not Unfold This Sheet Until Told to Begin

Directions: Do not turn this page until the person conducting this test gives the signal to begin. This is a ten-minute test. There are 80 problems. Solve accurately and quickly as many as you can in the order in which they appear. **ALL PROBLEMS ARE TO BE SOLVED MENTALLY**. Make no calculations with paper and pencil. Write only the answer in the space provided at the end of each problem. Problems marked with a (*) require approximate integral answers; any answer to a starred problem that is within five percent of the exact answer will be scored correct; all other problems require exact answers.

The person conducting this contest should explain these directions to the contestants.
Stop – Wait for Signal!

(1) $21 \times 3 =$ _____

(2) $12 + 24 =$ _____

(3) $38 - 24 =$ _____

(4) $4 + 6 + 8 =$ _____

(5) $210 \div 3 =$ _____

(6) $87 - 24 - 13 =$ _____

(7) $78 + 87 =$ _____

(8) $149 + 396 =$ _____

(9) $48 \div 8 \div 2 =$ _____

*(10) $1981 + 1951 + 2021 =$ _____

(11) 26439.70251 rounded to the hundredths place is _____decimal

(12) $14 \times 50 =$ _____

(13) Which digit is in the ten-thousandths place in 21034.96587? _____

(14) $25 \times 36 =$ _____

(15) What is the remainder for $2020 \div 9$? _____

(16) Thirty-three plus nineteen equals _____

(17) $7\times10^4 + 5\times10^3 + 6\times10^0 =$ _____

(18) $44 \times 6 + 44 \times 4 =$ _____

(19) MCMLI = _____ (Arabic Numeral)

*(20) $89800 \div 15 =$ _____

(21) $503 - 305 =$ _____

(22) $24 - 18 \div 3 =$ _____

(23) $3\frac{3}{4}$ minutes = _____seconds

(24) $25\frac{3}{4}\%$ = _____ decimal

(25) $\frac{11}{24} + \frac{7}{24} =$ _____

(26) $75 \times 40 =$ _____

(27) 0.65 = _____ common fraction

(28) If 24 ♣ costs \$6.00, then 16 ♣ cost \$_____

(29) $38 \times 46 =$ _____

*(30) $11.0065 \times 708 =$ _____

(31) $234 \times 11 =$ _____

(32) The largest prime number smaller than 70 is _____

(33) How many odd whole numbers are between 19 and 31? _____

(34) $\frac{33}{10} \div \frac{3}{100} =$ _____

(35) 375 millimeters = _____decimeters

(36) The number of days in April is_____

(37) The sum of the unique primes of 70 is _____

(38) 375% = _____(mixed number)

(39) 44×0.75 = _____

*(40) 402×1210 = _____

(41) 2^4 = _____

(42) 23^2 = _____

(43) If the volume of a rectangular box with sides 12, 5 and x is 240, then x = _____

(44) The perimeter of a rectangle with sides 18 and x is 66. What is x? _____

(45) If $x - 24 = 16$, then x = _____

(46) $\frac{9}{16} \div \frac{3}{4}$ = _____

(47) $6\frac{2}{9} \div 2\frac{1}{3}$ = _____(mixed number)

(48) 2.25×8 = _____

(49) If $x = 15$, then $9 + 3x$ = _____

*(50) 13^4 = _____

(51) What is $3\boldsymbol{a} - \boldsymbol{b}$, in the sequence: 1, 4, 9, ***a***, 25, ***b***, 49 . . .? _____

(52) What is the radius of a circle with a circumference of 144π? _____

(53) What is the area of a right triangle with hypotenuse 10 in. and leg 8 in.? _____square inches

(54) 102×103 = _____

(55) What whole number cubed minus three equals twenty-four? _____

(56) What is the surface area of a cube with edge 3?

_____

(57) If set **A** = {A, R, L, I, N, G, T, O, N} and set **B** = {T, A, R, R, A, N, T}, then the number of elements in $\mathbf{A} \cup \mathbf{B}$ is _____

(58) If the number of unique elements in a set has a power set equal to 32, the number of elements is _____

(59) What is the perimeter of the regular octagon with side length of $6\frac{3}{4}$? _____

*(60) $110 \times \pi^2$ = _____

(61) 31 (base 4) = _____ (base 2)

(62) $12 \times 3^3 \div 18$ = _____

(63) The area of a square with diagonal 24 is _____

(64) 58^2 = _____

(65) A black bag contains 12 black, 15 green and 9 red marbles. The probability of randomly picking a green marble is _____

(66) What is the cost of 11 feet of chain that cost 49¢ per foot? $_____

(67) If the perimeter of a regular octagon is 118 inches, then the length of each side is _____inches

(68) If $3x + 4 < 40$, then $x <$ _____

(69) $\frac{10}{7} + \frac{7}{10} = 2 +$ _____

*(70) $149 \times \sqrt{48400}$ = _____

(71) 24 pints = _____ gallons

(72) The area of a rhombus with diagonal lengths of 18 and x is 108. What is x? _____

(73) If 24% of 32 is 8% of x, then x = _____

(74) $(24) \div (-6) - 12$ = _____

(75) 64×125 = _____

(76) $12^2 + 24^2$ = _____

(77) If the area of a semicircle is 32π, then the radius of the semicircle is _____

(78) 555×111 = _____

(79) The perimeter of a square with area 529 is_____

*(80) 4375×160 = _____

2020 – 2021 TMSCA Elementary Number Sense Test Online State – Key

(1) 63

(2) 36

(3) 14

(4) 18

(5) 70

(6) 50

(7) 165

(8) 545

(9) 3

*(10) 5656 – 6250

(11) 26439.70

(12) 700

(13) 8

(14) 900

(15) 4

(16) 52

(17) 75006

(18) 440

(19) 1951

*(20) 5688 – 6286

(21) 198

(22) 18

(23) 225

(24) .2575

(25) $\frac{3}{4}$; .75

(26) 3000

(27) $\frac{13}{20}$

(28) 4.00

(29) 1748

*(30) 7403 – 8182

(31) 2574

(32) 67

(33) 5

(34) 110

(35) 3.75; $3\frac{3}{4}$; $\frac{15}{4}$

(36) 30

(37) 14

(38) $3\frac{3}{4}$

(39) 33

*(40) 462099 – 510741

(41) 16

(42) 529

(43) 4

(44) 15

(45) 40

(46) $\frac{3}{4}$; .75

(47) $2\frac{2}{3}$

(48) 18

(49) 54

*(50) 27133 – 29989

(51) 12

(52) 72

(53) 24

(54) 10506

(55) 3

(56) 54

(57) 8

(58) 5

(59) 54

*(60) 1032 – 1139

(61) 1101

(62) 18

(63) 288

(64) 3364

(65) $\frac{5}{12}$

(66) 5.39

(67) 14.75; $\frac{59}{4}$; $14\frac{3}{4}$

(68) 12

(69) $\frac{9}{70}$

*(70) 31141 – 34419

(71) 3

(72) 12

(73) 96

(74) -16

(75) 8000

(76) 720

(77) 8

(78) 61605

(79) 92

*(80) 665000 – 735000

Note: *(Number) x – y means an integer between x and y inclusive.

If an answer is of the type like $\frac{2}{3}$ it cannot be written as .666… or $.\overline{6}$.