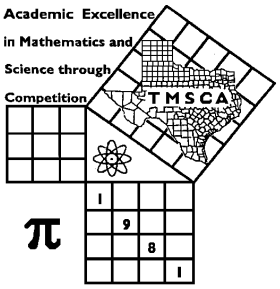
1st Score: _____ Grader: _____	2nd Score: _____ Grader: _____	3rd Score: _____ Grader: _____	**Final Score**

PLACE LABEL BELOW

Name:_____ School:_____

SS/ID Number:_____ City:_____

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



T M S C A E L E M E N T A R Y

N U M B E R S E N S E

S P R I N G O L T E S T ©

2 0 2 1

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
2021 Elementary Number Sense Test Spring Online

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) $7 \times 9 =$ _____

(2) $52 + 8 =$ _____

(3) $28 - 23 =$ _____

(4) $9 + 7 + 5 =$ _____

(5) $66 \div 6 =$ _____

(6) $8 \times 31 =$ _____

(7) $8 \times 10 \times 5 =$ _____

(8) $11 \times 9 =$ _____

(9) $108 \div 12 =$ _____

*(10) $2020 + 2019 + 2021 =$ _____

(11) $25 \times 6 =$ _____

(12) 157381.206738 rounded to the hundred-thousandths place is_____(decimal)

(13) $390 \div 30 =$ _____

(14) MMXX =_____ (Arabic numeral)

(15) How many even numbers are between 25 and 11?

_____

(16) Which digit is in the hundredths place in 21530.47698 ? _____

(17) $1951 \div 4$ has a remainder of _____

(18) $19 \times 12 =$ _____

(19) $9\times10^3 + 6\times10^2 + 3\times10^0 =$ _____

*(20) $2490 \times 83 =$ _____

(21) 108 inches =_____ feet

(22) $\frac{13}{24} + \frac{5}{24} =$ _____

(23) $18 \div 6 \times 3 =$ _____

(24) $\frac{31}{5} =$_____ (decimal)

(25) 124 percent =_____(mixed number)

(26) $65 \times 35 =$ _____

(27) Which is larger: 0.667 or $\frac{2}{3}$? _____

(28) $\frac{3}{10} - \frac{5}{100} =$_____(common fraction)

(29) What is the twin prime of 17? _____

*(30) $454 \times 329 =$ _____

(31) Six is to eight as n is to twenty-four. n =_____

(32) The sum of the unique prime factors of 70 is _____

(33) If 9 ♥ cost 30¢, then 6 ♥ cost_____¢

(34) $99 \times 99 =$ _____

(35) $\frac{14}{15} - \frac{1}{15} - \frac{3}{15} =$ _____(common fraction)

(36) $\frac{21}{100} \div \frac{3}{10} =$ _____

(37) The least common multiple of 12 and 16 is _____

(38) $101 \times 77 =$ _____

(39) $(20 + 319) \div 9$ has a remainder of _____

*(40) $\sqrt{101124} =$ _____

(41) $\frac{4}{9} + \frac{1}{6} =$ _____ (common fraction)

(42) What is the perimeter of a rectangle with adjacent sides of 15 and 16? _____

(43) $11 \times 405 =$ _____

(44) What is the perimeter of an equilateral triangle with a side 19? _____

(45) 12 quarts = _____ pints

(46) $6\frac{1}{4} \times 6\frac{3}{4} =$ _____ (mixed number)

(47) In the sequence -3, -1, 1, 3, ***k***, 7, . . . , $k - 1 =$ _____

(48) $2^4 =$ _____

(49) 45 minutes = _____ hour

*(50) $17^3 =$ _____

(51) $3 \times \frac{5}{6} =$ _____ (mixed number)

(52) $1\frac{2}{5} + 2\frac{3}{10} =$ _____ (mixed number)

(53) If $13 \times n = 39$, then $n =$ _____

(54) If set A = {H, O, U, S, T, A, N} and set B = {T, E, X, A, N, S}, then the number of elements in $A \cap B$ is _____

(55) 53 (Base 6) = _____ (Base 10)

(56) The perimeter of a square with side 6.25 is _____

(57) $28 \times 32 + 4 =$ _____

(58) For a right triangle, if the length of a hypotenuse is 15 and one leg is 9, then the other leg is _____

(59) $\frac{12}{10} \div \frac{3}{5} =$ _____

*(60) $31990 \times 625\% =$ _____

(61) $108 \times 108 =$ _____

(62) $(-3)^3 + 2^5 =$ _____

(63) $(-18) \div (-2) - 6 =$ _____

(64) The number of faces on a square pyramid is _____

(65) If the diameter of a circle is 16, then its circumference is $k\pi$. What is ***k***? _____

(66) What is the probability of randomly drawing a red odd numbered card from a standard deck of 52 cards?

_____

(67) The perimeter of a rhombus with side 18 is _____

(68) $8^2 \times \left(\frac{1}{4}\right)^2 =$ _____

(69) 17 (Base 8) = _____ (Base 2)

*(70) $\pi^3 \times 167 =$ _____

(71) The area of a parallelogram with base 28 and height 25 is _____

(72) What is the multiplicative inverse of $\frac{5}{4}$? _____

(73) If $16 - 5x < 36$, then $x <$ _____

(74) $83^2 =$ _____

(75) $15^2 - 20^2 = 5 \times$ _____

(76) If the probability of an event happening is $\frac{6}{9}$, then the probability of the event not happening is _____

(77) $14 = 87\frac{1}{2}\% \times$ _____

(78) If the sales tax is $2\frac{1}{4}\%$, then the tax on an item that costs \$200 is \$ _____

(79) $108 \times 0.25 =$ _____

*(80) $13 \times 13 \times 26 =$ _____

2021 TMSCA Elementary Number Sense Test Spring Online – Key

(1) 63

(2) 60

(3) 5

(4) 21

(5) 11

(6) 248

(7) 400

(8) 99

(9) 9

*(10) 5757 – 6363

(11) 150

(12) 157381.20674

(13) 13

(14) 2020

(15) 7

(16) 7

(17) 3

(18) 228

(19) 9603

*(20) 196337 – 217003

(21) 9

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

(23) 9

(24) 6.2

(25) $1\frac{6}{25}$

(26) 2275

(27) .667

(28) $\frac{1}{4}$

(29) 19

*(30) 141898 – 156834

(31) 18

(32) 14

(33) 20

(34) 9801

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

(36) $\frac{7}{10}$; .7

(37) 48

(38) 7777

(39) 6

*(40) 303 – 333

(41) $\frac{11}{18}$

(42) 62

(43) 4455

(44) 57

(45) 24

(46) $42\frac{3}{16}$

(47) 4

(48) 16

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

*(50) 4668 – 5158

(51) $2\frac{1}{2}$

(52) $3\frac{7}{10}$

(53) 3

(54) 4

(55) 33

(56) 25

(57) 900

(58) 12

(59) 2

*(60) 189941 – 209934

(61) 11664

(62) 5

(63) 3

(64) 5

(65) 16

(66) $\frac{2}{13}$

(67) 72

(68) 4

(69) 1111

*(70) 4920 – 5436

(71) 700

(72) $\frac{4}{5}$; .8

(73) -4

(74) 6889

(75) -35

(76) $\frac{1}{3}$

(77) 16

(78) 4.50

(79) 27

*(80) 4175 – 4613

Note: *(Number) x – y means an integer between x and y inclusive.
If an answer is of the type like 2/3 it cannot be written as .666… or $.\overline{6}$.