University Interscholastic League
2020 – 2021 Elementary Number Sense Test C

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) $220 + 211 =$ _____

(2) $220 \div 4 =$ _____

(3) $53 \times 11 =$ _____

(4) $615 - 414 =$ _____

(5) $11 + 12 + 13 =$ _____

(6) $40 - 18 - 12 =$ _____

(7) $51 \times 25 =$ _____

(8) $503 - 317 =$ _____

(9) $5 \times 27 \times 6 =$ _____

*(10) $210 \times 667 + 30 =$ _____

(11) 51287.29301 rounded to the tens place is _____

(12) $29 \times 31 =$ _____

(13) Which digit is in the hundred-thousandths place in 12340.56789? _____

(14) $101 \times 43 =$ _____

(15) What is the remainder for $2174 \div 9$? _____

(16) How many odd whole numbers are between 5 and 28? _____

(17) $7\times10^3 + 4\times10^1 + 1\times10^{-1} =$ _____ (decimal)

(18) $18 \times 5 + 5 \times 4 =$ _____

(19) MMXXI = _____(Arabic Numeral)

*(20) $269 \times 1109 =$ _____

(21) $2345 + 5432 =$ _____

(22) $15 + 12 \div 3 =$ _____

(23) 14 weeks = _____ days

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

(25) $\frac{11}{36} + \frac{13}{36} =$ _____

(26) $96 \times 97 =$ _____

(27) $0.72 =$ _____ common fraction

(28) If 18 ♣ costs 88¢ then 54 ♣ cost $ _____

(29) $88 \times 82 =$ _____

*(30) $1249 \times 479 =$ _____

(31) $875 \div 25 =$ _____

(32) The smallest prime number greater than 50 is _____

(33) Which is larger: $\frac{5}{12}$ or $\frac{3}{7}$? _____

(34) $\frac{27}{100} \div \frac{63}{100} =$ _____

(35) 111 feet = _____yards

(36) The LCM of 18 and 27 is _____

(37) $21 + 19 + 17 + 15 =$ _____

(38) 87.5% = _____common fraction

(39) The GCF of 24 and 36 is _____

*(40) $444\frac{4}{9}$ % of 2690 = _____

(41) 23^2 = _____

(42) 7^3 = _____

(43) The volume of a rectangular box with sides 8, 3 and 12 centimeters is _____cm^3

(44) The area of a rectangle with sides 25 m and 24 m is _____ m^2

(45) If $x + 33 = 44$, then x = _____

(46) $\frac{5}{16} \times \frac{4}{15}$ = _____

(47) $5\frac{2}{3} \times 5\frac{1}{3}$ = _____ (mixed number)

(48) 48×75 =_____

(49) If $x = 5$, then $27 - 3x$ = _____

*(50) 16^4 = _____

(51) What is the number, ***k***, in the sequence: 1, 4, 9, ***k***, 25, 36 . . .? _____

(52) What is the diameter of a circle with an area equal to 25π? _____

(53) What is the perimeter of a right triangle with legs 9 in. and 12 in.? _____ inches

(54) 55×85 =_____

(55) What whole number squared minus eighteen is equal to forty-six? _____

(56) A rectangle with perimeter 32 has sides that are 12 and ***x***. What is ***x***? _____

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

(58) How many elements are in the power set of {-3, Z, 2}?_____

(59) What is the perimeter of the regular pentagon with side length of $2\frac{4}{5}$?_____

*(60) 11 miles = _____feet

(61) 321 (base 4) = _____ (base 10)

(62) $16 + 2^4 \div 4 - 2$ =_____

(63) The perimeter of a square with side 3.5 is _____

(64) 42^2 =_____

(65) A black bag contains 10 black, 16 green and 24 red marbles. The probability of blindly picking a red marble is_____

(66) What is the cost of 9 pounds of meat that cost $6.99 per pound? $_____

(67) The sum of the interior angles for a pentagon is _____degrees

(68) If $x + 14 > 21$, then $x >$ _____

(69) $\frac{5}{6} + \frac{6}{5}$ = _____(mixed number)

*(70) $624 \times 321 - 4$ = _____

(71) 40 ounces = _____quarts

(72) What is the area of a rhombus with diagonal lengths of 25 and 26? _____

(73) If 16% of x is 8% of 18, then x = _____

(74) $(-28) \div (-4) - 7$ = _____

(75) 625×40 = _____

(76) $11^2 + 33^2$ = _____

(77) What is the distance between -14 and 14 on the number line?_____

(78) 759×111 = _____

(79) The area of a square with diagonal 18 is _____

*(80) $\sqrt{164025}$ = _____

2020 – 2021 University Interscholastic League Elementary Number Sense Test C – Key

(1) 431

(2) 55

(3) 583

(4) 201

(5) 36

(6) 10

(7) 1275

(8) 186

(9) 810

*(10) 133095 – 147105

(11) 51290

(12) 899

(13) 9

(14) 4343

(15) 5

(16) 11

(17) 7040.1

(18) 110

(19) 2021

*(20) 283405 – 313237

(21) 7777

(22) 19

(23) 98

(24) .0475

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

(26) 9312

(27) $\frac{18}{25}$

(28) 2.64

(29) 7216

*(30) 568358 – 628184

(31) 35

(32) 53

(33) $\frac{3}{7}$

(34) $\frac{3}{7}$

(35) 37

(36) 54

(37) 72

(38) $\frac{7}{8}$

(39) 12

*(40) 11358 – 12553

(41) 529

(42) 343

(43) 288

(44) 600

(45) 11

(46) $\frac{1}{12}$

(47) $30\frac{2}{9}$

(48) 3600

(49) 12

*(50) 62260 – 68812

(51) 16

(52) 10

(53) 36

(54) 4675

(55) 8

(56) 4

(57) 11

(58) 8

(59) 14

*(60) 55176 – 60984

(61) 57

(62) 18

(63) 14

(64) 1764

(65) $\frac{12}{25}$; .48

(66) 62.91

(67) 540

(68) 7

(69) $2\frac{1}{30}$

*(70) 190285 – 210315

(71) 1.25; $1\frac{1}{4}$; $\frac{5}{4}$

(72) 325

(73) 9

(74) 0

(75) 25000

(76) 1210

(77) 28

(78) 84249

(79) 162

*(80) 385 – 425

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 $.\overline{6}$.