University Interscholastic League
2021 – 2022 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) $222 + 19 =$ _____

(2) $12 \times 8 =$ _____

(3) $2020 \div 5 =$ _____

(4) $2022 - 1981 =$ _____

(5) $7 \times 10 \times 6 =$ _____

(6) $6 \times 336 =$ _____

(7) $154 \div 11 =$ _____

(8) $53 - 7 - 13 =$ _____

(9) $16 \times 25 =$ _____

*(10) $2021 \times 399 =$ _____

(11) 414599.6206 rounded to the hundreds place is _____

(12) $52 \times 48 =$ _____

(13) Which digit is in the ten-thousandths place in 21340.65789? _____

(14) $22 \times 12 =$ _____

(15) What is the remainder for $3672 \div 9$? _____

(16) There are _____ whole numbers between 11 and 3.

(17) $5\times10^3 + 6\times10^1 + 1\times10^{-1} =$ _____ (decimal)

(18) $11 \times 23 - 11 \times 15 =$ _____

(19) MMXIX = _____ (Arabic Numeral)

*(20) $8218 \times 29 + 8220 =$ _____

(21) $16 + 21 + 26 + 31 =$ _____

(22) $36 \div 6 \times 2 =$ _____

(23) $5\frac{1}{2}$ days = _____ hours

(24) $5\frac{3}{8}\% =$ _____ decimal

(25) $\frac{7}{16} + \frac{3}{16} =$ _____

(26) $98 \times 97 =$ _____

(27) $0.62 =$ _____ common fraction

(28) If 60 ♣ costs 80¢ then 15 ♣ cost _____ ¢

(29) $11 \times 47 =$ _____

*(30) $269 \times 667 =$ _____

(31) 53 quarters = _____ nickels

(32) The sum of the two largest primes less than 25 is _____

(33) \$7.31 minus 6 quarters = \$ _____

(34) $\frac{21}{100} \div \frac{33}{100} =$ _____

(35) 108 inches = _____ feet

(36) The LCM of 24 and 16 is _____

(37) $101 \times 69 =$ _____

(38) $62\frac{1}{2}\% =$ _____common fraction

(39) The ratio of ounces in 1 cup to 1 pint is _____

*(40) $77\frac{7}{9}\% \times 3601 =$ _____

(41) $19^2 =$ _____

(42) $5^3 =$ _____

(43) The volume of a cube with side 2-cm is_____cm^3

(44) The perimeter of a rectangle with sides 14-m and 36-m is _____m

(45) If $57 + x = 214$, then $x =$ _____

(46) $\frac{7}{9} \div \frac{14}{15} =$ _____

(47) $11\frac{4}{5} \times 11\frac{1}{5} =$ _____ (mixed number)

(48) $78 \times 38 =$_____

(49) If $x = 19$, then $3x - 19 =$ _____

*(50) $29 \times 30 \times 31 =$ _____

(51) What is the number, ***k***, in the sequence: 0, 3, 8, 15, ***k***, 35, 48, . . .? _____

(52) If the area of a circle is 169π, what is the diameter of the circle? _____

(53) What is the area of a right triangle with hypotenuse 13 in. and leg 12 in.? _____ in^2

(54) $32 \times 125 =$_____

(55) What whole number squared plus nineteen equals one hundred? _____

(56) A triangle has sides of 24-in, 18-in and 18-in. What is its semi-perimeter? _____in

(57) How many elements are in the intersection of the sets {1, 2, 3, . . . , 15} and {1, 3, 5, . . . , 21}?_____

(58) How many elements are in the power set of {F, I, V, E}? _____

(59) What is the perimeter of a regular hexagon with a side length of $7\frac{5}{6}$?_____

*(60) 2022 years = _____ months

(61) 24 (base 10) = _____ (base 3)

(62) $-4^2 \div 8 =$ _____

(63) 12 square feet =_____sq.in.

(64) $73^2 =$ _____

(65) Two fair dice are thrown. What is the probability that the sum of the two sides showing is 7? _____

(66) 8 quarters plus 8 nickels plus 11 dimes plus 15 cents = $ _____

(67) The volume of a rectangular box that measures 12-m by 5-m by 12-m is_____m^3

(68) If $x + 24 > 16$, then $x >$ _____

(69) $\frac{5}{7} + \frac{7}{5} =$ _____ (mixed number)

*(70) $181 \times 1111 + 9 =$ _____

(71) 440 seconds = _____minutes

(72) For a rectangle with sides 5-cm and 8-cm, what is the ratio of its perimeter to its area?_____

(73) If 9% of x is 18% of 6, then $x =$ _____

(74) $(-15) + (-36) \div (-9) =$ _____

(75) $42^2 + 14^2 =$ _____

(76) $51^2 - 40^2 =$ _____

(77) What is the distance between -12 and 18 on the number line?_____

(78) $56 \times 143 =$ _____

(79) The area of a square with diagonal 14 is _____

*(80) $\sqrt{396900} =$ _____

2021 – 2022 University Interscholastic League Elementary Number Sense Test C – Key

(1) 241

(2) 96

(3) 404

(4) 41

(5) 420

(6) 2016

(7) 14

(8) 33

(9) 400

*(10) 766061 – 846697

(11) 414600

(12) 2496

(13) 8

(14) 264

(15) 0

(16) 7

(17) 5060.1

(18) 88

(19) 2019

*(20) 234215 – 258869

(21) 94

(22) 12

(23) 132

(24) .05375

(25) $\frac{5}{8}$; .625

(26) 9506

(27) $\frac{31}{50}$

(28) 20

(29) 517

*(30) 170452 – 188394

(31) 265

(32) 42

(33) 5.81

(34) $\frac{7}{11}$

(35) 9

(36) 48

(37) 6969

(38) $\frac{5}{8}$

(39) $\frac{1}{2}$; .5

*(40) 2661 – 2940

(41) 361

(42) 125

(43) 8

(44) 100

(45) 157

(46) $\frac{5}{6}$

(47) $132\frac{4}{25}$

(48) 2964

(49) 38

*(50) 25622 – 28318

(51) 24

(52) 26

(53) 30

(54) 4000

(55) 9

(56) 30

(57) 8

(58) 16

(59) 47

*(60) 23051 – 25477

(61) 220

(62) -2

(63) 1728

(64) 5329

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

(66) 3.65

(67) 720

(68) -8

(69) $2\frac{4}{35}$

*(70) 191045 – 211155

(71) $7\frac{1}{3}$; $\frac{22}{3}$

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

(73) 12

(74) -11

(75) 1960

(76) 1001

(77) 30

(78) 8008

(79) 98

*(80) 599 – 661

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 $.\overline{6}$.