University Interscholastic League
2019 – 2020 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) $31 + 46 =$ _____

(2) $77 - 25 =$ _____

(3) $2020 \div 20 =$ _____

(4) $321 \times 3 =$ _____

(5) $218 - 69 =$ _____

(6) $132 \div 4 =$ _____

(7) $19 + 22 + 25 =$ _____

(8) $34 \times 2 \times 5 =$ _____

(9) Which digit is in the thousandths place in 12360.97485 ? _____

*(10) $2020 \times 249 =$ _____

(11) $22 \times 18 =$ _____

(12) $24 \times 11 - 11 \times 6 =$ _____

(13) 18764.06956 rounded to the thousands place is _____

(14) CLXIV = _____ (Arabic numeral)

(15) There are _____ odd numbers between 5 and 32.

(16) $23\times10^2 + 5\times10^1 + 5\times10^{-1} =$ _____ (decimal)

(17) $48 \times 101 =$ _____

(18) $8291 \div 9$ has a remainder of _____

(19) $53 \times 25 =$ _____

*(20) $2017 + 2020 + 2023 =$ _____

(21) $16.16 \times 50 =$ _____

(22) $\frac{11}{24} + \frac{7}{24} =$ _____ (common fraction)

(23) $1\frac{1}{4}$ yards = _____ inches

(24) $20 \div 8 \times 4 =$ _____

(25) $\frac{19}{50} =$ _____ decimal

(26) Which is smaller: $\frac{13}{15}$ or $\frac{7}{8}$? _____

(27) 72 percent = _____ (common fraction)

(28) $175 \times 16 =$ _____

(29) The smallest prime greater than 80 is _____

*(30) $167 \times 2390 + 499 =$ _____

(31) $3\frac{1}{3}$ % = _____ (common fraction)

(32) The number of unique prime factors of 90 is _____

(33) $\frac{23}{24} - \frac{5}{24} =$ _____ (common fraction)

(34) $\frac{15}{100} - \frac{1}{10} =$ _____ (common fraction)

(35) Twelve is to eight as eighteen is to n. n = _____

(36) If 12 ♠ cost 72¢, then 8 ♠ cost _____¢

(37) The least common multiple of 36 and 30 is _____

(38) $(17 \times 16 \times 15) \div 7$ has a remainder of _____

(39) $225 \times 80 =$ _____

*(40) $10180 \div 6\frac{1}{4} =$ _____

(41) If $z = 3.5$, then $14 + 4z =$ _____

(42) $\frac{11}{12} - \frac{1}{4} =$ _____ (common fraction)

(43) A number, x, added to 12 equals 30. What is x?

_____

(44) The area of a rectangle is 200 and the length of one side is 25. The length of the other side is _____

(45) 108 inches = _____ yards

(46) $24^2 =$ _____

(47) $12\frac{5}{6} + 3\frac{3}{4} =$ _____ (mixed number)

(48) 134 (Base 8) = _____ Base 10

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

*(50) $12^4 \div 3^3 =$ _____

(51) $16 \times 1\frac{3}{4} - \frac{1}{2} =$ _____

(52) $95 \times 96 =$ _____

(53) $\frac{6}{11} + \frac{11}{6} =$ _____ (mixed number)

(54) If set A = {C, H, E, R, R, Y} and set B = {P, I, E}, then the number of elements in $A \cup B$ is _____

(55) If 28 is subtracted from three times a number, the result is 20. The number is _____

(56) $65 \times 12 \div 5 =$ _____

(57) If $3x + 24 = 36$, then $x =$ _____

(58) What is the volume of a rectangular box with sides 20 cm, 24 cm and 10 cm? _____ cm^3

(59) A circle has an area of 64π. What is the circle's diameter? _____

*(60) $\sqrt{265225} =$ _____

(61) $(32) - (-28) \div (-2) =$ _____

(62) $8^2 - 22^2 =$ _____

(63) $\frac{1}{3} + \frac{1}{6} + \frac{1}{9} =$ _____

(64) The area of an isosceles triangle with sides 10, 10, and 16 is _____

(65) $21^2 + 63^2 =$ _____

(66) If a pair of dice is thrown, the probability that the sum of the dice is an odd number is _____

(67) If the largest angle of an isosceles triangle is 112°, what is the measure of one of the other angles? ____°

(68) $\sqrt{225} - \sqrt{361} =$ _____

(69) 49 (Base 10) = _____ (Base 6)

*(70) $235^2 =$ _____

(71) $24 \times \left(\frac{5}{8} - \frac{1}{2}\right) =$ _____

(72) The perimeter of a regular hexagon is $3\frac{1}{2}$. What is the length of one side? _____

(73) \$6.75 = _____ quarters

(74) If $40 + 3x > 1$, then $x >$ _____

(75) $12 \times 120 =$ _____

(76) If a black bag contains 8 blue, 13 red, and 15 green marbles, what is the probability of randomly drawing a green marble? _____

(77) $22\frac{2}{9}$ % of 27 is _____

(78) If the angles of a quadrilateral are 90°, 57°, and 63°, what is the measure of the fourth angle? _____°

(79) $240 \times 15 =$ _____

*(80) $303 \times 201 \times 89 =$ _____

2019 – 2020 University Interscholastic League Elementary Number Sense Test C – Key

(1) 77

(2) 52

(3) 101

(4) 963

(5) 149

(6) 33

(7) 66

(8) 340

(9) 4

*(10) 477831 – 528129

(11) 396

(12) 198

(13) 19000

(14) 164

(15) 13

(16) 2350.5

(17) 4848

(18) 2

(19) 1325

*(20) 5757 – 6363

(21) 808

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

(23) 45

(24) 10

(25) .38

(26) $\frac{13}{15}$

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

(28) 2800

(29) 83

*(30) 379648 – 419610

(31) $\frac{1}{30}$

(32) 3

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

(34) $\frac{1}{20}$

(35) 12

(36) 48

(37) 180

(38) 6

(39) 18000

*(40) 1548 – 1710

(41) 28

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

(43) 18

(44) 8

(45) 3

(46) 576

(47) $16\frac{7}{12}$

(48) 92

(49) 24

*(50) 730 – 806

(51) $27\frac{1}{2}$; 27.5; $\frac{55}{2}$

(52) 9120

(53) $2\frac{25}{66}$

(54) 7

(55) 16

(56) 156

(57) 4

(58) 4800

(59) 16

*(60) 490 – 540

(61) 18

(62) -420

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

(64) 48

(65) 4410

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

(67) 34

(68) -4

(69) 121

*(70) 52464 – 57986

(71) 3

(72) $\frac{7}{12}$

(73) 27

(74) -13

(75) 1440

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

(77) 6

(78) 150

(79) 3600

*(80) 5149349 – 5691385

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 $.\overline{6}$.