**University Interscholastic League**
**2020 – 2021 Elementary Number Sense Test A**

**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) $21 + 20 =$ _____

(2) $11 \times 13 =$ _____

(3) $200 \div 40 =$ _____

(4) $12 + 13 + 14 =$ _____

(5) $69 - 21 =$ _____

(6) $25 \times 21 =$ _____

(7) $49 - 12 - 13 =$ _____

(8) $461 - 208 =$ _____

(9) $21 \times 5 \times 2 =$ _____

*(10) $199 + 2021 + 3499 =$ _____

(11) 73082.92361 rounded to the thousandths place is _____ (decimal)

(12) $19 \times 21 =$ _____

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

(14) $21 \times 101 =$ _____

(15) What is the remainder for $2918 \div 4$? _____

(16) There are _____ whole numbers between 8 and 21.

(17) $4\times10^3 + 6\times10^2 + 8\times10^{-2} =$ _____ (decimal)

(18) $16 \times 5 + 4 \times 5 =$ _____

(19) DLX = _____ (Arabic Numeral)

*(20) $2021 \times 19 + 2021 =$ _____

(21) $2021 + 1202 =$ _____

(22) $24 - 8 \div 2 =$ _____

(23) $1\frac{1}{2}$ years = _____ months

(24) $2\frac{1}{2}\%$ = _____ decimal

(25) $\frac{19}{20} - \frac{7}{20} =$ _____

(26) $102 \times 103 =$ _____

(27) 0.45 = _____ common fraction

(28) If 12 ♣ costs 80¢ then 96 ♣ cost $ _____

(29) $55 \times 75 =$ _____

*(30) $333 \times 2397 =$ _____

(31) $8989 \div 101 =$ _____

(32) The largest prime number less than 50 is _____

(33) Which is smaller: $\frac{8}{15}$ or $\frac{4}{7}$? _____

(34) $\frac{9}{100} \div \frac{3}{100} =$ _____

(35) 72 inches = _____ yards

(36) The GCD of 18 and 24 is _____

(37) $15 + 18 + 21 + 24 =$ _____

(38) 62.5% = _____common fraction

(39) The LCM of 12 and 8 is _____

*(40) $333\frac{1}{3}$% of 6598 = _____

(41) $18^2$ = _____

(42) $6^3$ = _____

(43) The volume of a rectangular box with sides 8, 12 and 10 centimeters is _____$cm^3$

(44) The area of a rectangle with sides 15 m and 20 m is _____ $m^2$

(45) If $x - 14 = 36$, then $x$ = _____

(46) $\frac{9}{10} \times \frac{2}{3}$ = _____

(47) $5\frac{1}{3} \times 4\frac{1}{3}$ = _____(mixed number)

(48) 75 × 16 =_____

(49) If $x = 12$, then $5 + 3x$ = _____

*(50) $15^4$ = _____

(51) What is the number, ***k***, in the sequence: 1, 4, 9, 16, ***k***, 36, 49, . . .? _____

(52) What is the diameter of a circle with a circumference equal to $4\pi$? _____

(53) What is the perimeter of a right triangle with legs 3 in. and 4 in.? _____ inches

(54) 28 × 22 =_____

(55) What whole number squared and added to eight equals thirty-three? _____

(56) A triangle with perimeter 48 has sides that are 12, 16 and ***x***. What is ***x***? _____

(57) If set **A** = {W, E, S, L, A, C, O} and set **B** = {L, O, S, E, B, A, N, O, S}, then the number of elements in **A** ∩ **B** is _____

(58) How many elements are in the power set of {0, 1, 2, 3, 4}?_____

(59) What is the perimeter of the equilateral triangle with side length of $8\frac{1}{3}$? _____

*(60) 135 days = _____hours

(61) 20 (base 10) = _____ (base 4)

(62) $12 + 2^4 \div 4$ =_____

(63) The area of a square with side 25 is _____

(64) $53^2$ =_____

(65) A black bag contains 8 black, 6 green and 4 red marbles. The probability of blindly picking a red marble is_____

(66) What is the cost of 5 pounds of meat that cost $7.99 per pound? $_____

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

(68) If $x - 3 < 8$, then $x <$ _____

(69) $\frac{5}{3} + \frac{3}{5}$ = _____ (mixed number)

*(70) 444 × 809 + 4 = _____

(71) 18 quarts = _____ gallons

(72) What is the area of a rhombus with diagonal lengths of 12 and 15? _____

(73) If 14% of $x$ is 28% of 6, then $x$ = _____

(74) $(-18) \div 2 + 17$ = _____

(75) 375 × 40 = _____

(76) $16^2 - 14^2$ = _____

(77) What is the distance between -9 and 12 on the number line?_____

(78) 111 × 234 = _____

(79) The area of a square with diagonal 16 is _____

*(80) $\sqrt{116281}$ = _____

# 2020 – 2021 University Interscholastic League Elementary Number Sense Test A – Key

(1) 41

(2) 143

(3) 5

(4) 39

(5) 48

(6) 525

(7) 24

(8) 253

(9) 210

*(10) 5434 – 6004

(11) 73082.924

(12) 399

(13) 8

(14) 2121

(15) 2

(16) 12

(17) 4600.08

(18) 100

(19) 560

*(20) 38399 – 42441

(21) 3223

(22) 20

(23) 18

(24) .025

(25) $\frac{3}{5}$; .6

(26) 10506

(27) $\frac{9}{20}$

(28) 6.40

(29) 4125

*(30) 758291 – 838111

(31) 89

(32) 47

(33) $\frac{8}{15}$

(34) 3

(35) 2

(36) 6

(37) 78

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

(39) 24

*(40) 20894 – 23093

(41) 324

(42) 216

(43) 960

(44) 300

(45) 50

(46) $\frac{3}{5}$; .6

(47) $23\frac{1}{9}$

(48) 1200

(49) 41

*(50) 48094 – 53156

(51) 25

(52) 4

(53) 12

(54) 616

(55) 5

(56) 20

(57) 5

(58) 32

(59) 25

*(60) 3078 – 3402

(61) 110

(62) 16

(63) 625

(64) 2809

(65) $\frac{2}{9}$

(66) 39.95

(67) 360

(68) 11

(69) $2\frac{4}{15}$

*(70) 341240 – 377160

(71) 4.5; $4\frac{1}{2}$; $\frac{9}{2}$

(72) 90

(73) 12

(74) 8

(75) 15000

(76) 60

(77) 21

(78) 25974

(79) 128

*(80) 324 – 358

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 $.\overline{6}$.