University Interscholastic League
2005 – 2006 Elementary Number Sense Test B

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) 42 + 43 = ____________________________
(2) 5 + 13 + 55 = ____________________________
(3) 78 – 35 = ____________________________
(4) 8 x 12 = ____________________________
(5) 64 + 4 = ____________________________
(6) XLV = ____________________________ Arabic Number
(7) 17 + 3 + 6 + 14 = ____________________________
(8) 25 x 12 = ____________________________
(9) 75 x 24 = ____________________________
*(10) 18 + 92 + 803 = ____________________________
(11) 78 x 11 = ____________________________
(12) 835 + 9 has a remainder of ____________________________
(13) 18 x 12 = ____________________________
(14) 104 x 105 = ____________________________
(15) 1 + 3 + 5 + 7 + ... + 11 = ____________________________
(16) 2842 + 14 = ____________________________
(17) 28 x 32 = ____________________________
(18) 705 – 56 – 24 = ____________________________
*(19) 16 + 32 + 48 = ____________________________
*(20) 6005 + 6899 + 606 = ____________________________
(21) The largest prime number less than 100 is ________
(22) 75 x 55 = ____________________________
(23) 30 quarts = ____________________________ pints
(24) 96% = ____________________________ (fraction)
(25) 3.19 – 1.58 = ____________________________ (decimal)
(26) 76520 decimeters = ____________________________ decameters
(27) Which is smaller \( \frac{8}{9} \) or \( \frac{11}{12} \)? ____________________________
(28) How many positive integers evenly divide into 24? ____________________________
(29) 0.36 + 0.5 = ____________________________ (decimal)
*(30) 334 x 479 = ____________________________
(31) 275 \( \notin \) = ____________________________ nickels
(32) If 4 pencils cost 96 \( \notin \), then a dozen pencils cost \$ ____________________________
(33) 12 – 8 + 2 = ____________________________
(34) The greatest common factor of 48 and 32 is ________
(35) What is the ratio of quarters to dimes in \$4.50? ____________________________
(36) \( \frac{17}{20} \) = ____________________________ decimal
(37) \( \frac{13}{16} - \frac{7}{16} \) = ____________________________ fraction
(38) 83 x 101 = ____________________________
The interest on $400 for six months at 6% is $.

The surface area of a sphere with radius 12 meters is.

A regular nonagon has sides.

26 x 22 + 24 x 22

What are the odds of rolling a single die and getting

\[ \frac{3}{4} \]

The multiplicative inverse of \( \frac{3}{4} \) is.

\[ \frac{4}{3} \]

What is the percent of 4 is 33% of 3?

The area of a rhombus is 200 square feet and one diagonal is 25 feet. The other diagonal is how many feet?

If the area of a triangle is 9 \( \text{cm}^2 \), then what is the height of a triangle with base 34 cm?

The next number in the series 1, 4, 9, 16, ... is.

The area of a triangle with base 25 and altitude 48 cm is.

\[ \frac{9}{4} \]

The next number in the series 1, 4, 9, 16, ... is.

\[ \frac{9}{4} \]

The volume of a solid rectangular box that measures 4", 5", and 6" is.

The area of a triangle with base 25 and altitude 48 cm is.

\[ \frac{9}{4} \]

\[ \frac{9}{4} \]

\[ \frac{9}{4} \]

\[ \frac{9}{4} \]