Number Sense Exam 054, 12/30/2017

(1) $2700 - 720 =$ _____

(2) $.25\% =$ _____ (fraction)

(3) $321 \div 9 =$ _____ (mixed number)

(4) MMLIX − LIII = _____ (Arabic Numeral)

(5) $2468 \div 9$ has a remainder of _____

(6) $40 + 32 \div 24 \times 16 - 8 =$ _____

(7) $.045 =$ _____ (fraction)

(8) $445 \div 9 =$ _____ (mixed number)

(9) $0.8333\ldots =$ _____ (proper fraction)

*(10) $19 + 919 + 1991 + 91119 =$ _____

(11) $35 \div 1\frac{2}{5} =$ _____

(12) Which is smaller: $\frac{8}{11}$ or $\frac{10}{13}$? _____

(13) 18% of 32 = _____

(14) $1\frac{1}{9}\% =$ _____ (fraction)

(15) $48 \times 22 - 22 \times 78 =$ _____

(16) $5 + 11 + 17 + 23 + 29 + 35 + 41 + 47 =$ _____

(17) 52 is 13% of _____

(18) 25% of 25 is _____ (decimal)

(19) 400 square centimeters = _____ square meters

*(20) $467 + 3217 - 861 + 19623 =$ _____

(21) The 3rd hexagonal number is _____

(22) $(13 \times 25 + 8 \times 13) \div 6$ has a remainder of _____

(23) 66% of 44 is 22% of _____

(24) $45 \times 65 =$ _____

(25) $200_7 =$ _____ 10

(26) $(31 \times 6 - 17) \div 8$ has a remainder of _____

(27) $37^2 + 67^2 =$ _____

(28) $(2 + 3^2 \times 4^3) \div 5$ has a remainder of _____

(29) If the line $9x - 7y = k$ has an x-intercept of $(4, 0)$, then $k =$ _____

*(30) $14^4 =$ _____

(31) GCD(15, 21) + LCM(15, 21) = _____

(32) If $x = 7$ and $y = 2$, then $(x - y)(x^2 + xy + y^2) =$

(33) If $3x + 4 = 5$, then $x^2 =$ _____

(34) 42% of 20 is _____ % of 60.

(35) $1^2 + 5^2 + 6^2 + 11^2 =$ _____

(36) The cube root of 1225043 is _____

(37) Find the simple interest on \$400.00 at 4% for 4 years. \$ _____

(38) $43_8 - 21_8 =$ _____ 8

(39) If a dozen pens cost \$8.76, then 4 pens cost \$ _____

*(40) $31.25\% \times 481 \div \frac{1}{16} =$ _____

(41) given $1190 \div 34 = 35$. Find $1190 \div 4.25$. _____

(42) $72 \times 11 + 99 \times 8 =$ _____

(43) If $7^x = 147$, then $7^{(x-2)} =$ _____

(44) $15 \times 336 =$ _____

(45) The perimeter of a square whose diagonal is $2\sqrt{2}$ inches is _____ inches

(46) If $6 - 5x < 4$, then $10x >$ _____

(47) $113 \times 212 =$ _____

(48) (x, y) is the midpoint of the line segment whose endpoints are $(2, 5)$ and $(5, 9)$. $y =$ _____

(49) $\sqrt{75} \times \sqrt{27} =$ _____

*(50) $\sqrt{96721} =$ _____

(51) $4 + \frac{8}{3} + \frac{16}{9} + \frac{32}{27} + \ldots =$ _____

(52) If $\log_4(3x + 2) = 1$, then $x =$ _____

(53) $\tan 30° =$ _____

(54) $(3 - 5\mathrm{i})(2 + 4\mathrm{i}) = a + b\mathrm{i}$. Find b. _____

(55) Find the smallest positive integral value for k such that $374k$ is divisible by 6. _____

(56) $(729)^{-\frac{2}{3}} =$ _____

(57) $5772 \div 111 =$ _____

(58) ${}_6\mathrm{P}_4 + {}_6\mathrm{P}_2 =$ _____

(59) The 11th term in the sequence $4, 7, 10, 13, \ldots$ is _____

*(60) $(2\pi^2) \times (3\pi^3) =$ _____

(61) The harmonic mean of the roots of $x^3 + Bx^2 + 3x + D = 0$ is 4. Find D. _____

(62) $24^2 + 48 =$ _____

(63) If $\log_4 2x + \log_4 3 = 2$, then $x =$ _____

(64) $\frac{5}{24} + \frac{5}{48} + \frac{5}{80} + \frac{5}{120} =$ _____

(65) $\frac{8}{27} \times 111 =$ _____ (mixed number)

(66) $\log_5 M = 2$, then $\sqrt{M} =$ _____

(67) $56^2 - 55^2 + 54^2 - 53^2 =$ _____

(68) The greatest integer function $f(x) = [x]$ has a value of _____ for $f(\pi)$

(69) Let $f(x) = [x]$ be the greatest integer function. Find $f(3\sqrt{3})$. _____

*(70) The cube root of 1795548 is _____

(71) Change .22 base 4 to a base ten decimal. _____

(72) If $f(x) = x^4 - x^3 + x^2 - x + 1$, then $f''(1) =$ _____

(73) $\frac{1}{2} + \frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} + \frac{1}{42} =$ _____

(74) $\int_0^1 (-x)^3 \, dx =$ _____

(75) $\frac{1}{10} + \frac{1}{40} + \frac{1}{88} + \frac{1}{154} =$ _____

(76) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \frac{1}{15} =$ _____

(77) If $f(x) = \frac{3x}{2x + 1}$, then $f^{-1}(-3) =$ _____

(78) If $f(x) = x^4 + x^2 - x$, then $f''(-3) =$ _____

(79) If $f(x) = 3x^2 - 2x + 1$, then $f'(-4) =$ _____

*(80) $456 \div 18.75\% \times \frac{1}{4} =$ _____