Number Sense Exam 033, 7/28/2017

(1) $\frac{8}{15} \div 2\frac{2}{3} =$ _____

(2) $2016 \times 7 =$ _____

(3) $258 + 629 + 147 =$ _____

(4) $30.9 + 20.13 =$ _____ (decimal)

(5) $\frac{3}{4} \times \frac{8}{9} =$ _____

(6) $\$32.18 - \$16.29 = \$$ _____

(7) $\frac{2}{5} \times \frac{5}{2}$ _____

(8) $8453 - 4567 =$ _____

(9) $28 \div 11 + 82 \div 11 =$ _____

*(10) $18 + 188 + 1888 + 18888 =$ _____

(11) $\frac{3}{4}$ of a peck is equivalent to _____ quarts

(12) The GCD of 48 and 57 is _____

(13) $\left(9\frac{2}{3}\right)^2 =$ _____ (mixed number)

(14) $213 \times 14 =$ _____

(15) $\frac{15}{19} \times 15 =$ _____ (mixed number)

(16) $\frac{3}{800} =$ _____ % (decimal)

(17) 23.4 milligrams = _____ grams

(18) $48 - 24 + 12 - 6 + 3 =$ _____

(19) 11% of 24 plus 24% of 11 is _____

*(20) $8691078 \div 432 =$ _____

(21) The sum of the positive integral divisors of 20 is _

(22) $1\frac{2}{3} \times 2\frac{3}{4} =$ _____

(23) $3\frac{2}{5} \div \frac{2}{5} =$ _____

(24) The sum of x and 5 gives the same result as the product of x and 5. Find x. _____

(25) $11011_2 =$ _____ 8

(26) $1.25 - .75 - .25 =$ _____ (proper fraction)

(27) If $x = 13$ and $y = 2$, $x^2 + 2xy + y^2 =$ _____

(28) $108_{10} =$ _____ 4

(29) $7^3 =$ _____

*(30) $108 \times 119 + 12 \times 121 =$ _____

(31) How many subsets containing 3 elements does the set $\{m, a, t, h\}$ have? _____

(32) If $\sqrt{5 - \sqrt{3 + \sqrt{x}}} = 1$, then $x =$ _____

(33) $4 \times 4! - 12 \times 3! =$ _____

(34) $3 + 6 + 9 + 15 + 24 + \ldots + 102 + 165 =$ _____

(35) $1 + 3 + 5 + 7 + \ldots + 31 =$ _____

(36) If set A has 5 elements, set B has 4 elements and $A \cup B$ hsa 6 elements, then the number of elements in $A \cap B$ is _____

(37) The sum of the roots of $6x^2 + x + 3 = 0$ is _____

(38) $65_{10} =$ _____ 7

(39) $123 \times 17 =$ _____

*(40) $\sqrt{111011} =$ _____

(41) The largest integer x such that $5x - 7 \leq -9$ is __

(42) If $x - 4 \geq 13$, then $2x \geq$ _____

(43) The sum of the roots of $3x^2 + 6x = 9$ is _____

(44) The next term of $1, 1, 2, 3, 5, 8, 13, \ldots$ is _____

(45) $555 \times \frac{2}{37} =$ _____

(46) $\frac{4}{5} - \frac{19}{26} =$ _____

(47) 18% of $183\frac{1}{3} =$ _____

(48) If $32^x = 128$, then $x =$ _____

(49) $38 \times 28 =$ _____

*(50) $8^3 \times 5^3 =$ _____

(51) $\sin\left(\frac{11\pi}{6}\right) =$ _____

(52) $(3 + 4\mathrm{i})^2 = a + b\mathrm{i}$. Find $a + b$. _____

(53) $\frac{\pi}{180}$ radians = _____ (degrees)

(54) For what value of k does the sum of the roots of $x^2 + kx + 12 = 0$ have a value of 6? _____

(55) The simplified coefficient of the x^2y^2 term in the expansion of $(2x + y)^4$ is _____

(56) The smallest integer x such that $3 - 4x < 5$ is ___

(57) $511 \times 212 =$ _____

(58) 18% of $316\frac{2}{3} =$ _____

(59) If $\log_1 2x = 3$ then $x =$ _____

*(60) $14 \times 28 \times 45 =$ _____

(61) $987 \times 9 + 5 =$ _____

(62) $\frac{\pi}{5}$ radians = _____ degrees

(63) $606^2 =$ _____

(64) $f(x) = 4x - 1$ and $g(x) = 2 + 3x$. $g(f(\frac{1}{2})) =$ ___

(65) The greatest integer less than $12\sqrt{2}$ is _____

(66) How many 3-digit integers have ab 8 as the middle digit? _____

(67) The dot product for $u = (3, 3)$ and $v = (1, 1)$ is __

(68) $\sin(\arccos .6) =$ _____ (decimal)

(69) $42_6 - 24_6 =$ _____ 6

*(70) $34343 \div 124 =$ _____

(71) $13 \times \frac{13}{14} - 13 =$ _____

(72) If $\det \begin{bmatrix} 4 & 3 \\ 8 & x \end{bmatrix} = 6$, then $x =$ _____

(73) $(115)^2 =$ _____

(74) $\int_{-1}^{1} (2 - x^3)\, dx =$ _____

(75) If $f(x) = 2x - 1$, then $f^{-1}(3) =$ _____

(76) $\int_0^1 \sqrt[3]{x}\, dx =$ _____

(77) $3\ln(e^4) =$ _____

(78) The nth term of $-1, 3, 7, 11, \ldots$ is _____

(79) $(3x^3 + 2x^2 - x + 1)$ divided by $(x - 1)$ has a remainder of _____

*(80) $369 \div 37\frac{1}{2}\% \times 1.2 =$ _____