Number Sense Exam 018, 3/23/2017

(1) $4 \div (5 + 6 - 7) \times 8 =$ _____

(2) $\dfrac{5}{6} + \dfrac{7}{8} =$ _____ (improper fraction)

(3) $\dfrac{7}{8} \div .2 =$ _____ (improper fraction)

(4) $1212 \div 9 =$ _____ (mixed number)

(5) $2\dfrac{1}{6} + 1\dfrac{11}{12} =$ _____

(6) $5566 \div 11 =$ _____

(7) $2\dfrac{3}{4} - 3\dfrac{4}{5} =$ _____ (mixed number)

(8) $2\dfrac{5}{8} =$ _____ % (decimal)

(9) $562 - 628 =$ _____

*(10) $188 + 818 + 881 - 118 =$ _____

(11) $(34 + 65 + 96) \div 3$ has a remainder of _____

(12) $2 + 4 + 6 + \ldots + 28 + 30 =$ _____

(13) Which is larger: $.72$ or $\dfrac{7}{9}$? _____

(14) $35 \div 1\dfrac{2}{5} =$ _____

(15) Which is larger: $-2\dfrac{2}{5}$ or -2.35? _____

(16) 26 is 65% of what? _____

(17) $2010 \div 9$ has a remainder of _____

(18) $23 \times 15 + 33 \times 15 =$ _____

(19) 25% of 25 is _____ (decimal)

*(20) $\sqrt{839} \times \sqrt{963} =$ _____

(21) $45^2 + 46^2 =$ _____

(22) $\sqrt{12} + \sqrt{48} = \sqrt{x}$. Find x. _____

(23) Which of the following is an odious number: $63, 31$, or 15. _____

(24) 12% of 63 is 14% of _____

(25) Find the area of the rhombus whose diagonals are 22 and 18. _____ sq. units.

(26) If one dozen eggs cost $\$2.40$, then 2.5 dozen eggs cost $\$$ _____

(27) $101110_2 =$ _____ ${}_8$

(28) $423156 \div 12$ has a remainder of _____

(29) $1^2 + 2^2 + 3^2 + 5^2 + 8^2 =$ _____

*(30) $43205 \div 111 =$ _____

(31) If $x + (x + 1) + (x + 2) + (x + 3) = 66$, then $(x + 4) =$ _____

(32) $0.2333\ldots =$ _____ (fraction)

(33) $5\dfrac{1}{5} \times 15\dfrac{1}{5} =$ _____

(34) If $4^{-1} + x^{-1} = 3^{-1}$, then $x =$ _____

(35) The ratio of the sides of a rectangle is 3:5. The perimeter is 32. The shorter side is _____

(36) $(5! + 3!) \div 4! =$ _____ (mixed number)

(37) $73^2 - 72^2 =$ _____

(38) 12% of 200 is _____ % of 50

(39) $4\dfrac{1}{3} \times 5\dfrac{1}{3} =$ _____ (mixed number)

*(40) $16\dfrac{1}{2}\%$ of $598 \times 11 =$ _____

(41) If P is $\dfrac{2}{3}$ of Q and Q is $33\dfrac{1}{3}\%$ of R, then P is what percent of R? _____ %

(42) If $2^{3.14} = 8.82$, then $2^{2.14} =$ _____

(43) A set containing k elements has 1023 proper subsets. Find k. _____

(44) $133_4 + 23_4 =$ _____ $_4$

(45) $29 \times 33 + 4 =$ _____

(46) An exterior angle of a regular hexagon has a measure of _____ degrees

(47) $(13)^2 - (8)(21) =$ _____

(48) $\dfrac{(11!)(3!)}{(9!)} =$ _____

(49) The units digit of 17^5 is _____

*(50) $719 \times 875 =$ _____

(51) $31_6 + 22_6 - 35_6 =$ _____ $_6$

(52) $(1 - 3i)(2 - 4i) = a + bi$, then $a + b =$ _____

(53) $-11^2 + 10^2 - 9^2 + 8^2 - \ldots - 1^2 =$ _____

(54) $202 \times 53 =$ _____

(55) 18% of $316\dfrac{2}{3} =$ _____

(56) $(3 - 2/mboxi)^2 =$ _____

(57) $\dfrac{4}{9} - \dfrac{2}{3} + 1 - \dfrac{3}{2} + \ldots =$ _____

(58) $36^2 + 57^2 =$ _____

(59) The largest integer x such that $3 < 4 - 5x$ is _____

*(60) $714.2857 \times 246 =$ _____

(61) $1(0!) + 2(1!) + 3(2!) + 4(3!) + 5(4!) =$ _____

(62) $76^2 =$ _____

(63) 15 miles per hour = _____ feet per second

(64) If $\ln(27) - k\ln(3) - 2\ln(3)$, then $k =$ _____

(65) If $f(x) = \dfrac{3 - 2x}{4}$, then $f^{-1}(-1) =$ _____

(66) $\dfrac{4\pi}{9}$ radians = _____ degrees

(67) The simplified coefficient of the x^2 term in the expansion of $(2x - 3)^3$ is _____

(68) If $g(x) = x^2$ and $g^{-1}(x) > 0$, then $g^{-1}(676) =$ ___

(69) The radius of hte circumscribed circle around a $5, 12, 13$-right triangle is _____

*(70) The perimeter of the ellipse $145x^2 + 168y^2 = 24360$ is _____

(71) $\displaystyle\int_{-1}^{2} 4x\ dx =$ _____

(72) Change .33 base 6 to a base 10 fraction. _____

(73) $16 \times 625 =$ _____

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

(75) $\displaystyle\int_{1}^{3} 2x^3\ dx =$ _____

(76) If $f(x) = 3x - 1$ and $g(x) = 2$ then $f(g(x)) =$ ___

(77) $9^4 \div 243 =$ _____

(78) The remainder when $x^3 - 4x + 3$ is divided by $x + 2$ is _____

(79) $(909)^2 =$ _____

*(80) $34 \times 68 \times 17 \div 51 =$ _____