Number Sense Exam 034, 8/5/2017

(1) 123 \times 9 + 5 = 

(2) 115 + 2013 = 

(3) \frac{7}{10} \times \frac{5}{14} = 

(4) 3 \frac{2}{5} \% = (proper fraction)

(5) 34^2 = 

(6) DCCXLIX = (Arabic numeral)

(7) 9 \frac{1}{3} \% = (proper fraction)

(8) 18 + 15 \div 5 \times 9 = 

(9) \frac{9}{10} \times \frac{1}{2} = 

\text{*(10) } 399 \times 308 + 125 = 

(11) 42 \times 24 = 

(12) \frac{4}{3} \% \text{ of } 12 = (decimal)

(13) \frac{3}{\frac{1}{3}} \times 63 = 

(14) The multiplicative inverse of \frac{7}{6} is 

(15) \frac{9}{\frac{4}{9}} + \frac{8}{\frac{2}{3}} = (mixed number)

(16) The simple interest on $1800 at 6\% for 4 months is $ 

(17) 16 \times 7 - 14 \times 32 = 

(18) The multiplicative inverse of -.62 is 

(19) The average of 41, 62, and 80 is 

\text{*(20) } 509 \times \sqrt{905} = 

(21) 80 has positive integral divisors 

(22) If \frac{8}{x} = \frac{x}{10} \text{ and } x > 0, \text{ then } x = 

(23) Sue drove 180 miles in 4.5 hours. Her average speed was 

(24) 15 \times 11 \times 25 = 

(25) If 6 pens cost $1.50 then 21 pens cost $ 

(26) 12 \times 345 = 

(27) 36 \div 75 = (decimal)

(28) 72 \times 78 = 

(29) 86 base ten is equivalent to base 5 

\text{*(30) } \sqrt[3]{1092730} = 

(31) 112 \times 211 = 

(32) Given 32120 \div 15 = 2141 \frac{1}{3}, \text{ find } 32120 \div 5. 

(33) 7^8 \div 9 \text{ has a remainder of } 

(34) 48 \text{ inches per second is } \text{ feet per minute} 

(35) 44^2 - 45^2 = 

(36) 54 \times 33 + 33 \times 26 = 

(37) 37 \times 43 = 

(38) \frac{6}{5} \times \frac{2}{5} = (mixed number)

(39) 43 \times 47 = 

\text{*(40) } 33 \times 44 \times 55 = 

(41) Find the geometric mean of 4 and 16. 

(42) The y-intercept of 6x - 2y = 8 is (x, y). y = 

(43) If 8 \times 8^3 \div 8^k = 8^7, \text{ then } k = 

(44) The side opposite 60° in a right triangle is \(3\sqrt{3}\) units. The length of the other side is units.
(45) The exterior angle of a regular octagon contains ________________ degrees.

(46) If \(2^{-1} + x^{-1} = 8^{-1}\), then \(x = \) ________________.

(47) \(93 \times 94 = \) ________________.

(48) Find the slope of the line containing the points \((-5, 5)\) and \((3, -3)\). ________________

(49) \(\frac{7}{20} - \frac{22}{59} = \) ________________

* (50) \(12 \times 14 \times 16 = \) ________________

(51) \((3i - 2) \div (3i + 2) = a + bi.\ b = \) ________________

(52) \(-11^2 + 10^2 - 9^2 + 8^2 - \ldots - 1^2 = \) ________________

(53) \(\frac{7\pi}{4}\) radians = ________________ degrees

(54) The area of \(4x^2 + 9y^2 = 36\) is \(k\pi\). \(k = \) ________________

(55) \((4 - 7i)(4 + 7i) = a + bi.\ Find\ a + b.\ \) ________________

(56) The simplified coefficient of the \(x^2y^2\) term in the expansion of \((2x + y)^4\) is ________________.

(57) If \(\log_4(3x + 2) = 1\), then \(x = \) ________________

(58) 12\% of \(433\frac{1}{3}\) = ________________

(59) \((1 - 2i)(3 + 4i) = a + bi.\ Find\ b.\ \) ________________

* (60) \(23 \times 34 + 43 \times 32 = \) ________________

(61) \(12 \times \frac{13}{14} = \) ________________ (mixed number)

(62) \(69^2 + 69 = \) ________________

(63) \(\sin(\csc^{-1}(0.6)) = \) ________________

(64) The eleventh term of 5, 9, 13, 17, \ldots is ________________

(65) The slope of the line perpendicular to the line \(2x - 4y = 3\) ________________

(66) The greatest integer function \(g(x) = [3 - 2x]\) has a value of ________________ for \(g(\pi)\)

(67) \(34 + 13 + 5 + 2 + 1 = \) ________________

(68) \(\tan\left(\frac{\pi}{3}\right) \times \cot\left(\frac{\pi}{6}\right) = \) ________________

(69) The odds of losing is \(\frac{14}{11}\). The probability of losing is ________________

* (70) \(5.1^3 \times 7.9^3 = \) ________________

(71) If \(\arcsin(\cos\left(\frac{\pi}{6}\right)) = k\pi\), then \(k = \) ________________

(72) \(1(1!) + 2(2!) + 3(3!) + \ldots + 6(6!) = \) ________________

(73) How many regions in a plane are determined by 7 lines, no 2 are parallel and no 3 are concurrent? ________________

(74) The distance between the line \(3x - 4y = 6\) and the point \((5, 1)\) is ________________

(75) \(\lim_{x \to 2} \left(\frac{x^2 - 3x + 2}{x - 2}\right) = \) ________________

(76) \(1(1!) + 2(2!) + 3(3!) + 4(4!) = \) ________________

(77) What is the probability when 4 coins are tossed of getting 3 tails and 1 head? ________________

(78) If \(\sin \theta = 0.1\), then \(\csc \theta = \) ________________

(79) The graph of \(f(x) = \frac{(x^2 - 5x + 6)}{(x^2 - 4)}\) has a hole at \(x = \) ________________

* (80) \(44 \times 42 \div 54 \times 52 = \) ________________