

Number Sense Exam 029, 6/9/2017

- (1) $16.24 \div .8 =$ _____
- (2) $307 + 703 =$ _____
- (3) $28^2 =$ _____
- (4) $\frac{7}{15} + \frac{5}{11} =$ _____
- (5) $125 \times 5 - 12 =$ _____
- (6) CDXXIX = _____ (Arabic Numeral)
- (7) $30 \div 1\frac{1}{5} =$ _____
- (8) $\frac{2}{5} - \frac{3}{4} =$ _____ (fraction)
- (9) 22.5% = _____ (fraction)
- *(10) $777 - 888 + 99 =$ _____
- (11) $83 \times 38 =$ _____
- (12) The mean of 199, 201, and 203 is _____
- (13) $64 \times 1.5 =$ _____
- (14) 3 sq. feet = _____ sq. inches
- (15) $.3222\dots =$ _____ (proper fraction)
- (16) 30 is what percent less than 45? _____ %
- (17) $13 \times 321 =$ _____
- (18) CXLIV \times XII = _____ (Arabic Numeral)
- (19) $2 + 6 + 10 + 14 + 18 + 22 + 26 =$ _____
- *(20) $64665 \div 298 =$ _____
- (21) $13^2 =$ _____
- (22) If $f(x) = 4x^2 + 28x + 49$ then $f(19) =$ _____
- (23) Which of the following is both a happy number and an evil number: 7, 10, or 13? _____
- (24) $24^2 + 38^2 =$ _____
- (25) $2\frac{1}{4} + 1\frac{2}{3} =$ _____ (mixed number)
- (26) $15 \times 25 \times 16 =$ _____
- (27) 1.25 gallons = _____ ounces
- (28) $.166\dots + .333\dots + .8333\dots =$ _____
- (29) The set $\{s, i, x\}$ has _____ proper subsets
- *(30) $22 \times 24 \times 26 =$ _____
- (31) $\frac{9!}{(7!)(2!)} =$ _____
- (32) The sum of the roots of $(3x - 2)(2x + 1) = 0$ is _
- (33) $\sqrt{243} - \sqrt{75} = \sqrt{x}$. Find x . _____
- (34) If $f(x) = x^2 - 2x + 1$, then $f(2.1) =$ _____
- (35) $44^2 - 45^2 =$ _____
- (36) If $5! + 4! = (k)(3!)$, then $k =$ _____
- (37) $\frac{5! - 3!}{4!} =$ _____ (mixed number)
- (38) $2 + 4 \times 6 - 8 \div 10 =$ _____
- (39) 33 plus 75% of 44 is _____
- *(40) $11 \times 22 \times 33 =$ _____
- (41) 12% of $466\frac{2}{3} =$ _____
- (42) $35 \times 65 =$ _____
- (43) $48^2 - 42^2 =$ _____
- (44) $505 \times 505 =$ _____
- (45) The sum of the roots of $x^2 - 9 = 0$ is _____
- (46) A regular octahedron has _____ edges
- (47) $18 \times \frac{19}{20} =$ _____
- (48) $(3 - 7i)(5 - 2i) = a + bi$. Find $a - b$. _____

- (49) The slope of the line perpendicular to the line $3x - y = 5$ is _____
- *(50) $12 \times 14 \times 16 =$ _____
- (51) $1^2 - 2^2 + 3^2 - 4^2 + \dots - 10^2 =$ _____
- (52) ${}^7C_3 + {}^7C_4 =$ _____
- (53) If $3 \log_x 4 = 2$, then $x =$ _____
- (54) If $\log_5 x = -3$, then $x =$ _____
- (55) $\sqrt[3]{64 \times 64} =$ _____
- (56) A line perpendicular to $x = -4$ has a slope of ____
- (57) $\frac{7\pi}{4}$ radians = _____ degrees
- (58) Find the smallest positive integral value for k such that $374k$ is divisible by 6. _____
- (59) ${}^5P_3 + {}^5P_2 =$ _____
- *(60) $36 \times 41 \times 44 =$ _____
- (61) If A is $\frac{2}{3}$ of B and B is 60% of C , then A is what fractional part of C ? _____ (proper fraction)
- (62) The determinant of $\begin{bmatrix} -3 & 4 \\ -a & 2 \end{bmatrix}$ is 5. Find a . _____
- (63) $3 + 7 + 11 + 15 + \dots + 79 =$ _____
- (64) The greatest integer functions $g(x) = [2x - 7]$ has a value of _____ for $g(\sqrt{7})$
- (65) $\cos^2(45^\circ) + \sin^2(45^\circ) =$ _____
- (66) $\frac{8}{9} - \frac{31}{37} =$ _____
- (67) If $\log 2 = .3$ and $\log 3 = .48$, then $\log 18 =$ _____
- (68) How many words, real or imaginary, can be made from the letters C, A, L, C, U, L, U, S ? _____
- (69) $2 \sin 15^\circ \cos 15^\circ =$ _____
- *(70) $(1 + 2 + 3 + \dots + 29)^2 =$ _____
- (71) Set $U = \{x \mid x \in \{\text{Integers}\}, -3 < x < 5\}$ is a universal set and set $A = \{0, 1, 2, \}$. How many elements are in set A' ? _____
- (72) $\lim_{x \rightarrow 2} \left(\frac{x^2 - 1}{x - 2} \right) =$ _____
- (73) If $g(x) = x^4 - 4x + 4$, then $g'(4) =$ _____
- (74) $\frac{1}{56} + \frac{1}{72} + \frac{1}{90} + \frac{1}{110} =$ _____
- (75) $2(1!) + 3(2!) + 4(3!) + 5(4!) + 6(5!) =$ _____
- (76) The horizontal asymptote of $y = \frac{x+1}{x-3}$ is _____
- (77) The sum of the first nine terms of the Fibonacci sequence $-3, 4, 1, 5, 6, \dots$ is _____
- (78) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} =$ _____
- (79) $\lim_{x \rightarrow 5} \left(\frac{x^2 - 25}{x - 5} \right) =$ _____
- *(80) 3.75 square miles = _____ acres