

Number Sense Exam 075, 11/30/2018

- (1) $2.01 - 2\frac{1}{10} + 21 =$ _____ (decimal)
- (2) $3\frac{3}{5}\%$ = _____ (fraction)
- (3) $\frac{6}{7} + \frac{8}{9} =$ _____ (mixed number)
- (4) $64 \times 44 =$ _____
- (5) $\frac{7}{80} =$ _____ % (decimal)
- (6) $45 \times 85 =$ _____
- (7) $44 \times 25 =$ _____
- (8) $65 \times 85 =$ _____
- (9) $15^2 =$ _____
- *(10) $2009 \times 6 - 2009 =$ _____
- (11) $4.8 \times 15 =$ _____
- (12) $2\frac{3}{4} - 6\frac{7}{8} =$ _____ (mixed number)
- (13) $12 \div 1\frac{3}{5} =$ _____ (decimal)
- (14) $\text{MCM} + \text{CVIII} =$ _____ (Arabic Numeral)
- (15) $2 + 4 + 6 + 8 + \dots + 22 =$ _____
- (16) 25% of 25 is _____ (decimal)
- (17) The multiplicative inverse of $\frac{7}{6}$ is _____
- (18) $23 \times 34 + 23 \times 26 =$ _____
- (19) The largest prime divisor of 57 is _____
- *(20) $987 - 654 \times 321 =$ _____
- (21) $0.666\dots \times .272727\dots =$ _____
- (22) $3367 \times 27 =$ _____
- (23) Find the simple interest on \$500.00 at 5% for five years. \$ _____
- (24) 24% of _____ is 28% of 12.
- (25) If $24^2 - 20^2 = 11k$, then $k =$ _____
- (26) If $x = 3$ and $y = 7$, then $x^2 + 4xy + 4y^2 =$ _____
- (27) The LCM of 6, 16, and 24 is _____
- (28) 24 yards per second = _____ yards per minute
- (29) $(5^3 + 4^2 \times 3^1) \div 6$ has a remainder of _____
- *(30) $146 \times 5 \times 154 =$ _____
- (31) If 8 pens cost \$1.44, then 12 pens cost \$ _____
- (32) What number divided by 5 and subtracted from 24 gives the same result? _____
- (33) The area of an equilateral triangle is $\sqrt{3}$ cm². The side of the triangle is _____ cm
- (34) Find k if $59^2 - 47^2 = 24k$. $k =$ _____
- (35) $16 \times 66 - 16 \times 50 =$ _____
- (36) $3 + 6 + 9 + 15 + 24 + \dots + 102 + 165 =$ _____
- (37) A square has a diagonal of $4\sqrt{2}$ cm. The perimeter of the square is _____ cm.
- (38) Find the slope of the line perpendicular to the line $6x - 2y = 4$. _____
- (39) $5^{-1} + x^{-1} = 3^{-1}$, then $2x =$ _____
- *(40) $\sqrt{172839} =$ _____
- (41) If $3^{2x} = 121$, then $3^{3x} =$ _____
- (42) If $xy = 2$ and $x + y = 4$, then $x^3 + y^3 =$ _____
- (43) If (2, 3) is the midpoint of the line segment with endpoints $(-4, 7)$ and $(8, y)$, then $y =$ _____
- (44) If $8 \times 8^3 \div 8^k = 8^7$, then $k =$ _____

- (45) If $3x - 5 < 6x - 11$, then $x >$ _____
- (46) The first 3 digits of the decimal of $\frac{23}{90}$ is 0. _____
- (47) The axis of symmetry for the parabola $y = x^2 - 3x + 4$ is $x =$ _____
- (48) If $x < 0$ and $|2x - 5| = 9$ then $x =$ _____
- (49) $\frac{1}{4}(64^2 - 36^2) =$ _____
- *(50) $24^3 \times 21^2 \div 4^4 =$ _____
- (51) For what value of k does the sum of the roots of $3x^2 + kx - 7 = 0$ equal $\frac{4}{3}$? _____
- (52) A regular octagon has _____ distinct diagonals.
- (53) The odds of rolling a composite number on a single die is _____ (proper fraction)
- (54) The 10th term of $4, 7, 10, 13, \dots$ is _____
- (55) The sum of the roots $(2x + 5)^2 - 1 = 0$ is _____
- (56) If $\log_5 6 + \log_5 4 = \log_5 x$, then $x =$ _____
- (57) The odds of winning are 3 to 8. The probability of not winning is _____ (proper fraction)
- (58) The slope of the line perpendicular to the line $4x + 5y = -6$ is _____
- (59) For what value of k does the sum of the roots of $x^2 + kx + 12 = 0$ have a value of 6? _____
- *(60) The area of $11x^2 + 36y^2 = 396$ _____
- (61) If $f(x) = 5 - 2x$, then $f^{-1}(3) =$ _____
- (62) $7^6 \div 5$ has a remainder of _____
- (63) $909 \times 909 =$ _____
- (64) $\sin(30^\circ) + \cos(60^\circ) =$ _____
- (65) $0.232323\dots_5 =$ _____ $_5$ (proper fraction)
- (66) The greatest integer function $g(x) = [2x - 3]$ has a value of _____ for $g(\pi)$
- (67) 68 is 4.25% of _____
- (68) The distance between the line $3x + 4y = 1$ and the point $(-2, 2)$ is _____
- (69) If $\log_3 x = -3$ then $x^{-1} =$ _____
- *(70) $72827 \div 266 =$ _____
- (71) $\int_2^4 \left(\frac{x}{2} - 4\right) dx =$ _____
- (72) The remainder when $x^3 - 4x + 3$ is divided by $x + 2$ is _____
- (73) $\frac{1}{35} + \frac{1}{63} + \frac{1}{99} =$ _____
- (74) $1 + 3 + 6 + 10 + \dots + 28 =$ _____
- (75) $\int_0^3 (3x + 2) dx =$ _____
- (76) The vertex of the parabola $3(y - 4) = (x + 2)^2$ is (h, k) and $h =$ _____
- (77) $1^3 + 2^3 + 3^3 + 4^3 + 5^3 + 6^3 =$ _____
- (78) The horizontal asymptote of $y = \frac{(2x - 1)}{(3x + 2)(2x + 6)}$ is $y =$ _____
- (79) How many lines are determined by four points, no three of which are collinear? _____
- *(80) $456 \div 18.75\% \times \frac{1}{4} =$ _____