

Number Sense Exam 023, 4/23/2017

- (1) $1\frac{3}{5} \times 2\frac{1}{2} =$ _____
- (2) $3913 + 3193 =$ _____
- (3) DCCXLIX = _____ (Arabic numeral)
- (4) $82.4 - 7.83 =$ _____
- (5) $25 \times 157 =$ _____
- (6) $1212 + 2121 =$ _____
- (7) $15 \times 28 =$ _____
- (8) $80000 - 8000 - 800 - 80 - 8 =$ _____
- (9) $61 \times 16 =$ _____
- *(10) $12 + 29 + 214 + 525 + 435 =$ _____
- (11) The LCM of 27 and 36 is _____
- (12) $23 \times 41 - 23 \times 16 =$ _____
- (13) 7.3 is _____ % (decimal) of $12\frac{1}{2}$
- (14) $2010 \div 9 =$ _____ (mixed number)
- (15) CCLXXX \div XIV = _____ (Arabic Numeral)
- (16) The largest prime divisor of 65 is _____
- (17) 1 gallon - 5 pints = _____ ounces
- (18) $2 + 4 + 6 + \dots + 22 =$ _____
- (19) $\frac{11}{13} \times 11 =$ _____ (mixed number)
- *(20) $22 \times 23 + 2600 =$ _____
- (21) 63 base ten is equivalent to _____ base 4
- (22) $24^2 + 38^2 =$ _____
- (23) $\sqrt{27 \times 48} =$ _____
- (24) $\sqrt[3]{2197} =$ _____
- (25) $2 + 1 + 3 + 4 + 7 + \dots + 47 + 76 =$ _____
- (26) 24% of 25 is 20% of _____
- (27) Find the simple interest on \$1500 at 1.5% for 15 months. \$ _____
- (28) If $5^{(-1)} + x^{(-1)} = 4^{(-1)}$, then $x =$ _____
- (29) $3367 \times 27 =$ _____
- *(30) $30456 \div 141 =$ _____
- (31) Truncate $\sqrt{2}$ to the tenths place. _____
- (32) $|-1-1| + |-2+3| - |5-8| =$ _____
- (33) $212 \times 16 =$ _____
- (34) How many distinct elements are in $\{p, o, i, n, t\} \cup \{l, i, n, e\} \cap \{p, l, a, i, n\}$? _____
- (35) A CD sells for \$20 plus 8.25% sales tax. The total cost of the CD is \$ _____
- (36) If $x = 7$ and $y = 2$, then $(x - y)(x^2 + xy + y^2) =$ _____
- (37) $6\frac{2}{5} \times 4\frac{2}{5} =$ _____ (mixed number)
- (38) $10 \times 4! + 8 \times 5! =$ _____
- (39) $\{p, o, w, e, r\} \cup \{s, e, t\}$ has _____ distinct elements
- *(40) $\sqrt{122015} =$ _____
- (41) $40^\circ\text{C} =$ _____ $^\circ\text{F}$
- (42) $202^2 =$ _____
- (43) The measure of an exterior angle of a regular n -gon is 18° . $n =$ _____ sides
- (44) If $4x - 3 = 3x + 2$ then $2x - 1 =$ _____
- (45) $345_8 =$ _____ $_2$

- (46) The area of a trapezoid with bases of 3'' and 4'' is 14 sq. in. Its height is _____ in.
- (47) $(123 \times 9 + 4) + (1234 \times 8 + 4) =$ _____
- (48) $.242424\dots =$ _____ (fraction)
- (49) $21 \times 31 =$ _____
- *(50) $105 \times 145 =$ _____
- (51) The coefficient of the x^2y term of the expansion of $(3x + 2y)^3$ is _____
- (52) The expansion of $(2x - 3y)^3$ has how many terms? _____
- (53) $74 \times 66 + 8 =$ _____
- (54) $\frac{1}{5} + \frac{1}{25} + \frac{1}{125} + \dots =$ _____ (fraction)
- (55) $243 \times 151 =$ _____
- (56) The vertex for $y = x^2 - 4x + 2$ is (h, k) . $h =$ _____
- (57) $(k - 4i)^2 = -7 - 24i$. Find k . _____
- (58) For what value of k does the sum of the roots of $3x^2 + kx - 7 = 0$ equal $\frac{4}{3}$? _____
- (59) If $(5 + i)^2 = a + bi$, then $a =$ _____
- *(60) $857.142 \times 14 =$ _____
- (61) How many positive integers less than 63 are relatively prime to 63? _____
- (62) $\frac{8}{9} - \frac{31}{37} =$ _____
- (63) The simplified coefficient of the x^2 term in the expansion of $(2x - 3)^3$ is _____
- (64) $(2468_9 + 1357_9) \div 8$ has a remainder of _____
- (65) $\ln(e^4) =$ _____
- (66) $1 - 2\sin^2\left(\frac{2\pi}{3}\right) =$ _____
- (67) $22_5 \times 4_5 + 2_5 =$ _____ 5
- (68) The sum of the coefficients of $(2x + 3y)^3$ is _____
- (69) The smaller root of $9x^2 - 12x - 5 = 0$ is _____
- *(70) $e^3 \times \pi^3 =$ _____
- (71) $\lim_{x \rightarrow 1} \frac{1}{2x} =$ _____
- (72) Find $x, 0 \leq x \leq 6$, if $5x + 2 \equiv 8 \pmod{7}$. _____
- (73) The horizontal asymptote of $y = \frac{2x^2 - 1}{3x^2 + 2}$ is $y =$ _____
- (74) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} =$ _____
- (75) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} =$ _____
- (76) If $f(x) = x + 2$, then $f^{-1}(-2) =$ _____
- (77) Find $x, 0 \leq x < 7$, if $\frac{(5!)(3!)}{(4!)} \equiv x \pmod{7}$. _____
- (78) If $f(x) = x^3 - 3x + 3$, then $f''(2) =$ _____
- (79) If $f(x) = x^4 + 4x^3 + 6x^2 + 4x + 1$, find $f(4)$. _____
- *(80) $142857 \times 23.8 =$ _____