

Number Sense Exam 002, 12/02/2016

- (1) $972 - 279 =$ _____
- (2) $17 + 9 - 13 + 23 =$ _____
- (3) $\frac{6}{13} \times \frac{26}{15} \times \frac{5}{12} =$ _____
- (4) $1\frac{1}{16}\%$ = _____ (decimal)
- (5) $75 \times .84 =$ _____
- (6) $\frac{3}{4} + \frac{2}{3} =$ _____ (improper fraction)
- (7) $3^0 + 2 \times 5 + 4^{-1} =$ _____ (decimal)
- (8) $2013 - 201 + 13 =$ _____
- (9) $3143 \div 5 =$ _____ (decimal)
- *(10) $549 \times 62 =$ _____
- (11) Which is smaller, $1\frac{1}{3}$ or 1.3 ? _____
- (12) $-2 + |-1| - |-3 + 4| =$ _____
- (13) $12 \times 17 =$ _____
- (14) The number of positive integral divisors of 20 is _____
- (15) $1211 \div 9 =$ _____ (mixed number)
- (16) $\frac{7}{8} =$ _____ % (mixed number)
- (17) $25 \times 46 =$ _____
- (18) $\text{LCM}(35, 55) \times \text{GCD}(35, 55) =$ _____
- (19) $\text{CDXLIV} + \text{MDLXIX} =$ _____ (Arabic Numeral)
- *(20) $987 - 654 \times 321 =$ _____
- (21) 6 pints is what percent of a gallon? _____ %
- (22) 24% of _____ is 28% of 12.
- (23) If $f(x) = x^2 - 8x + 16$ then $f(24) =$ _____
- (24) $3367 \times 13 =$ _____
- (25) $\sqrt{40 \times 160}$ _____
- (26) $1421 \div 9 =$ _____ (mixed number)
- (27) If $37^2 - 31^2 = 2y$ then $y =$ _____
- (28) The LCM of 32 and 72 is _____
- (29) The largest root of $3x^2 - 10x + 8 = 0$ is _____
- *(30) $138 \times 3 \times 142 =$ _____
- (31) $14443 \times 17 =$ _____
- (32) $75 \times 284 =$ _____
- (33) $4^{-2} + 3^0 + 2^2 =$ _____
- (34) 38% of 42 is 76% of _____
- (35) What is the area of the largest square that can be put in a circle of diameter 6in.? _____ sq. in.
- (36) If $x^3 + 30 = 3$ then $x =$ _____
- (37) $3 \times 2! + 4 \times 3! + 5 \times 4! =$ _____
- (38) $43_8 - 21_8 =$ _____ ₈
- (39) 1 gallon = _____ ounces
- *(40) $\sqrt[3]{1730} \times \sqrt{142} \times 12 =$ _____
- (41) $212 \times 311 =$ _____
- (42) $13 \times 15 + 1 =$ _____
- (43) If the GCD of x and 20 is 5 and their LCM is 180, then $x =$ _____
- (44) If a 4'' by 6'' picture is enlarged to 6'' by 10'', its area is multiplied by _____
- (45) The next term of 2, 7, 22, 67, 202, ... is _____
- (46) If the sum of the interior angles of a regular n -gon is 900 degrees then $n =$ _____

- (47) $14443 \times 29 =$ _____
- (48) A right triangle has integral sides. If one leg is 13 then the other leg is _____
- (49) $91 \times 98 =$ _____
- *(50) $\sqrt{102100} =$ _____
- (51) The largest value of x such that $|3x - 4| \leq 7$ is _____
- (52) The vertex of the parabola $y = 3x^2 + 12x + 4$ is (h, k) and $k =$ _____
- (53) $36^2 + 57^2 =$ _____
- (54) $\frac{7}{9} - \frac{19}{29} =$ _____
- (55) A regular polygon with a central angle of 72° has a perimeter of $60''$. Each side is _____ inches
- (56) The next term of 4, 7, 12, 19, 28, ... is _____
- (57) $33 \times 32 =$ _____
- (58) If $\frac{3x}{5}$ has a remainder of 4 and $\frac{3y}{5}$ has a remainder of 1 then $\frac{xy}{5}$ has a remainder of _____
- (59) $12 + 9 + 6.75 + \dots =$ _____
- *(60) $29 \times 30 \times 29 \times 30 =$ _____
- (61) $\sin\left(\frac{13\pi}{6}\right) =$ _____
- (62) If $f(x) = 3x - \log_2 x$, find $f(4)$ _____
- (63) $(2 + 3i)(4 - 5i) = a + bi$ and $b =$ _____
- (64) $\cos(\arcsin 0) =$ _____
- (65) $\log_4 27 \div \log_4 3 =$ _____
- (66) $3 + 6 + 9 + \dots + 57 =$ _____
- (67) $\cos(\arccos .4) =$ _____
- (68) $\frac{5}{6} + 1.2 - 2 =$ _____
- (69) $1^2 - 2^2 + 3^2 - 4^2 + \dots - 10^2 =$ _____
- *(70) $(1 + 3 + 5 + 7 + \dots + 39)^2 =$ _____
- (71) What is the 5th triangular number? _____
- (72) The circle $x^2 + 4x + y^2 = 12$ has a radius of _____
- (73) Let t_n denote the n th triangular number. Find $t_9 + t_8$. _____
- (74) A store has red, blue, green, brown, purple, and yellow crayons. How many different sets of four crayons can the store sell? _____
- (75) $\sin^{-1}(-0.5) =$ _____ degrees
- (76) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} + \frac{1}{15} =$ _____
- (77) $\lim_{x \rightarrow 0} \frac{e^x - 1}{x} =$ _____
- (78) $1 + 3 + 6 + 10 + \dots + 28 =$ _____
- (79) $\lim_{x \rightarrow 2} \frac{2x^2 - 3x - 2}{x - 2} =$ _____
- *(80) $798 \div 44\frac{4}{9}\% \times .25 =$ _____