

Number Sense Exam 051, 12/1/2017

- (1) $6 - 5 \times 4 + 3 \div 2 =$ _____
- (2) $28\% =$ _____ (proper fraction)
- (3) $15 \div (12 - 9) + 6 \times 3 =$ _____
- (4) $3\frac{3}{5}\% =$ _____ (fraction)
- (5) $17^2 =$ _____
- (6) $2.25 \div (-1.5) =$ _____ (decimal)
- (7) $45 \times 85 =$ _____
- (8) $2.5 \times 48 =$ _____
- (9) $25 \times 4.28 =$ _____
- *(10) $9876 - 543 + 345 - 6789 =$ _____
- (11) $6\frac{1}{4}\%$ of 48 is _____
- (12) The mean of 18, 22, 36, and 44 is _____
- (13) $CLVI - XLIV =$ _____ (Arabic Numeral)
- (14) $-9 - (-7) - (-5) - 3 =$ _____
- (15) $\frac{11}{13} \times 11 =$ _____ (mixed number)
- (16) Which is larger: .54 or $\frac{6}{11}$? _____
- (17) $96 \times 97 =$ _____
- (18) $CXI - CC =$ _____ (Arabic Numeral)
- (19) 18 is _____ % less than 24
- *(20) $\sqrt{17425} =$ _____
- (21) The median of 1, 2, 1, 3, 8, and 5 is _____
- (22) The number of elements in the Cartesian product of $\{1, 2, 3, 4\}$ and $\{2, 3, 4\}$ is _____
- (23) $\sqrt[3]{2197} =$ _____
- (24) Which of the following is a square number, 8, 27, or 64? _____
- (25) $3\frac{1}{6} - 6\frac{1}{3} =$ _____ (mixed number)
- (26) The number of positive integral divisors of 45 is _____
- (27) $63 \times 429 =$ _____
- (28) $9 + 14 + 19 + 24 + 29 =$ _____
- (29) 130 base ten is equivalent to _____ base 5
- *(30) $\sqrt{393} \times 135 =$ _____
- (31) $16^2 + 48^2 =$ _____
- (32) $1 + 1 + 2 + 3 + 5 + 8 + 13 =$ _____
- (33) $143 \times 49 =$ _____
- (34) $7\frac{1}{5} \div 2\frac{1}{4} =$ _____ (mixed number)
- (35) If $f(x) = x^2 - 2x - 3$, then $f(3) =$ _____
- (36) $54 \times 33 + 33 \times 26 =$ _____
- (37) If $x < 0$ and x is to 2 as 8 is to x , then $x =$ _____
- (38) $12^2 + 24^2 =$ _____
- (39) $63^2 + 24^2 =$ _____
- *(40) $\sqrt[3]{1730} \times \sqrt{142} \times 12 =$ _____
- (41) (x, y) is the midpoint of the line segment whose endpoints are (2, 5) and (5, 9). $y =$ _____
- (42) 19% of $666\frac{2}{3}$ is _____ (mixed number)
- (43) If $3 - x < 1$, then $2x >$ _____
- (44) If the perimeter of a square is 35 units, then its area is _____ sq. units (mixed number)
- (45) $\frac{4}{5} - \frac{19}{26} =$ _____

- (46) $\frac{3}{4} - \frac{10}{13} =$ _____
- (47) The side opposite 60° in a right triangle is $2\sqrt{3}$ and the hypotenuse is _____
- (48) A hexagon has _____ distinct diagonals
- (49) $23 \times 27 + 4 =$ _____
- *(50) $798 \times 1.0625 \div \frac{17}{20} =$ _____
- (51) $213_5 \times 3_5 =$ _____ ₅
- (52) A die is rolled. What is the probability that a prime number is shown? _____
- (53) $3 + 4 + 5 + 6 + \dots + 20 =$ _____
- (54) $\sin\left(\frac{5\pi}{4}\right) \times \cos\left(\frac{5\pi}{4}\right) =$ _____
- (55) The largest integral value of x such that $|2x + 5| \leq 3$ is _____
- (56) A convex polygon has 14 distinct diagonals. How many sides does it have? _____
- (57) $222 \times \frac{5}{37} =$ _____
- (58) A convex hexagon has _____ distinct diagonals
- (59) $3 - 1 - \frac{1}{3} - \frac{1}{9} - \frac{1}{27} - \dots =$ _____
- *(60) $884422 \div 666 =$ _____
- (61) $\begin{bmatrix} 1 & 1 \\ 2 & 3 \end{bmatrix} \times \begin{bmatrix} 2 & 1 \\ 3 & 4 \end{bmatrix} = \begin{bmatrix} a & c \\ b & d \end{bmatrix}$. Find $a - d$. _____
- (62) If $\sin(\theta) = -.5$, then $\csc(\theta) =$ _____
- (63) $\sin\left(\frac{7\pi}{6}\right) =$ _____
- (64) How many 3-digit integers end in a 5? _____
- (65) If $9^{x-1} = 27^{x+2}$ then $x =$ _____
- (66) The sum of the positive integers less than 16 that are relatively prime to 16 is _____
- (67) $(3 + 4i)(2 - 5i) = a + bi$ and $b =$ _____
- (68) The odds of losing are 4 to 7. The probability of winning is _____
- (69) $19^2 - 18^2 + 17^2 - 16^2 =$ _____
- *(70) 48 miles per hours = _____ feet per minute
- (71) $f(x) = \frac{3 - 4x}{x - 5}$ has how many asymptotes? _____
- (72) $\int_0^2 (x^2) dx =$ _____
- (73) Change .21 base 5 to a base 10 decimal. _____
- (74) If $u = (2, -5)$ and $v = (-1, -7)$, are vectors, then their dot product is _____
- (75) If $f(x) = \frac{3x}{2x + 1}$, then $f^{-1}(-3) =$ _____
- (76) $(x^3 + 2x^2 - x + 1) \div (x + 1)$ has a remainder of _____
- (77) The horizontal asymptote of $y = \frac{x + 1}{x - 1}$ is _____
- (78) The minimum value of $y = x^2 + 4x$ is at $y =$ _____
- (79) The greatest integer function is written as $f(x) = [x]$. Find $f(\pi + e)$. _____
- *(80) $438 \div 9\frac{1}{11}\% \times 11.1 =$ _____