

Number Sense Exam 071, 10/26/2018

- (1) $43.2 - 2.86 =$ _____ (decimal)
- (2) $2001 \times 15 - 15 =$ _____
- (3) $.035 =$ _____ (fraction)
- (4) The GCD of 68 and 85 is _____
- (5) $2.01 - 2\frac{1}{10} + 21 =$ _____ (decimal)
- (6) $84 \times 75 =$ _____
- (7) $404 \div 25 =$ _____ (decimal)
- (8) $12 \times 22 + 16 \times 22 =$ _____
- (9) $397 + 248 =$ _____
- *(10) $12 + 29 + 214 + 525 + 435 =$ _____
- (11) How many even integers are between 14 and 52? _____
- (12) $\frac{2}{3} - \frac{2}{9} - \frac{2}{27} =$ _____
- (13) Which is larger: $-2\frac{2}{5}$ or -2.35 ? _____
- (14) 44 is what % of 80? _____ %
- (15) $57 \times 57 =$ _____
- (16) $1 + 2 + 3 + 4 + 5 + \dots + 20 =$ _____
- (17) The LCM of 12, 24, and 18 is _____
- (18) 4.5 is what % of 30? _____ %
- (19) $21 \div 2\frac{1}{2} =$ _____ (mixed number)
- *(20) $97531 \div 246 =$ _____
- (21) $0.125 \div 0.625 =$ _____
- (22) $54 \times 51 =$ _____
- (23) If $\frac{x}{4} = \frac{4}{5}$, then $x =$ _____
- (24) The length of a diagonal of a square is $3\sqrt{5}$ cm.
The area of the square is _____ sq. cm.
- (25) If $f(x) = |x - 8| + |8 - x|$ then $f(.5) =$ _____
- (26) If a pencil costs \$.13 then 12 pencils cost \$ _____
- (27) 26 is _____ % less than 65.
- (28) How far do you travel in one hour at 24 feet per minute? _____ feet
- (29) $88 \times 96 =$ _____
- *(30) $(46 \div 4 \times 3 + 37)^2 =$ _____
- (31) $\frac{5}{6} - \frac{9}{13} =$ _____
- (32) If $8x^3 - 18x^2 - 17x = 3$ and $P, Q,$ and R are the real roots, then $PQ + QR + PR$ is _____
- (33) If $x = 7$ and $y = 3$, then $x^2 - 2xy + y^2 =$ _____
- (34) If the universal set $U = \{n, u, m, b, e, r, s\}$ and set $A = \{s, u, m\}$, then the complement of set A contains how many distinct elements? _____
- (35) How many positive integers less than 20 are relatively prime to 20? _____
- (36) The slope of the line $3x + 4y = 12$ is _____
- (37) If $3x + 4 = 5$, then $x^2 =$ _____
- (38) Find the slope of the line perpendicular to the line $6x - 2y = 4$. _____
- (39) The set $\{3, 4, 5, 6, 7\}$ has _____ subsets
- *(40) $\sqrt[3]{1332} \times \sqrt{141} \times 13 =$ _____
- (41) If $\frac{x - 11}{x + 14} + \frac{x + 14}{x - 11}$ is written as the mixed number $A\frac{B}{C}$, then $B =$ _____

- (42) $y = x^2 - 2x + 3$ has a vertex at (h, k) .
Then $h + k =$ _____
- (43) If $|x| < 4$, then $x^2 - 1 <$ _____
- (44) $63 \div .875 =$ _____
- (45) Let $a^2 \div a^{-4} \div a^6 = a^k$ and $a > 1$, then $k =$ _____
- (46) $\frac{7}{12} - \frac{27}{49} =$ _____
- (47) The sum of the product of the roots taken two at a time of $x^4 - 2x^3 - 13x^2 + 14x - 24$ is _____
- (48) The side opposite 60° in a right triangle is $2\sqrt{3}$ and the hypotenuse is _____
- (49) If $3^x = 27$, then $3^{2x} =$ _____
- *(50) $29 \times 302 + 30 \times 299 =$ _____
- (51) $(2i - 3)(2i + 3) =$ _____
- (52) The x -intercept farthest to the right for $f(x) = 2x^2 - 50$ is $(x, 0)$ and $x =$ _____
- (53) The simplified coefficient of the 2nd term in the expansion of $(2x - y)^3$ is _____
- (54) $(2 - 5i)(3 + 5i) = a + bi$. Find a . _____
- (55) The integral sides of a triangle are 7, 9, and x . The greatest value of x is _____
- (56) If A is 20 more than B and C is 10 less than A , then C is how much more than B ? _____
- (57) $66 \div 1.375 =$ _____
- (58) Two numbers are in the ratio 3:11. If their sum is 84, find the smaller number. _____
- (59) Let $a^3b^2 \times ab^{-1} \div \left(\frac{a}{b}\right)^2 = a^mb^n$. Find $m + n$. _____
- *(60) $489657 \div 777.77 =$ _____
- (61) $\sqrt{-16} \times \sqrt{-9} =$ _____
- (62) $\frac{3}{8} + \frac{8}{3} - 2 =$ _____
- (63) $(\sin 225^\circ)(\cos 315^\circ) =$ _____
- (64) If P is $\frac{3}{4}$ of Q and Q is $\frac{2}{3}$ of R then R is what percent of P ? _____%
- (65) If $\log_b 2 = .25$ and $\log_b x = 1$, then $x =$ _____
- (66) $\det \begin{bmatrix} 1 & 3 \\ 2 & 4 \end{bmatrix} =$ _____
- (67) $\cos^2 30^\circ + \sin^2 30^\circ =$ _____
- (68) If $h(x) = x^3 - 1$ and $g(x) = (x - 1)^3$, then $g[h(-1)] =$ _____
- (69) When two dice are roled, what is the probability that the sum is a factor of 9? _____
- *(70) $(1 + 3 + 5 + 7 + \dots + 39)^2 =$ _____
- (71) $444 \times \frac{2}{27} =$ _____ (mixed number)
- (72) Change .12 base 5 to a base 10 decimal. _____
- (73) $1^3 + 2^3 + 3^3 + 4^3 + 5^3 =$ _____
- (74) $\frac{1}{3} + \frac{1}{6} + \frac{1}{10} =$ _____
- (75) $y = \frac{x^3 + 1}{x^3 - 1}$ has how many asymptotes? _____
- (76) $15 \times \frac{15}{19} - 15 =$ _____ (mixed number)
- (77) $\cos^{-1}(.8) + \cos^{-1}(.6) = k\pi$, then $k =$ _____
- (78) $\frac{1}{35} + \frac{1}{63} + \frac{1}{99} =$ _____
- (79) Change .34 base 6 to a base 10 fraction. _____
- *(80) $798 \div 44\frac{4}{5}\% \times .25 =$ _____