

Number Sense Exam 064, 4/1/2018

- (1) $532 \div 9 =$ _____ (mixed number)
- (2) $702 - 207 =$ _____
- (3) $2004 - 4002 =$ _____
- (4) $2.009 + 20.09 + 200.9 =$ _____ (decimal)
- (5) $5566 \div 11 =$ _____
- (6) $\frac{4}{9} \div .3 =$ _____
- (7) $30 \div 1\frac{1}{5} =$ _____
- (8) $43 \times 55 - 55 \times 23 =$ _____
- (9) $27 \times 27 =$ _____
- *(10) $4554 - 5665 - 6776 =$ _____
- (11) The sum of the prime numbers less than or equal to 13 is _____
- (12) $9 \times \frac{9}{13} =$ _____ (mixed number)
- (13) 1 gallon + 3 pints = _____ ounces
- (14) The reciprocal of 4.125 is _____
- (15) $7 + 12 + 17 + 22 + \dots + 47 =$ _____
- (16) $23 + 28 + 33 + 38 + 43 + 48 =$ _____
- (17) The average of 21, 18, and 33 is _____
- (18) $38^2 =$ _____
- (19) The average of 18, 29, and 16 is _____
- *(20) $1206 \times 2012 =$ _____
- (21) $17^2 + 51^2 =$ _____
- (22) $200_7 =$ _____ ₁₀
- (23) $(4)^{-1} + (4)^{-2} =$ _____
- (24) $25836k$ is divisible by 6. Find $k > 0$. _____
- (25) $2\frac{1}{4} + 1\frac{2}{3} =$ _____ (mixed number)
- (26) $1.444\dots + .333\dots =$ _____ (improper fraction)
- (27) The sum of the first 4 composite numbers is _____
- (28) If $3x - 5 = 15 - x$, then $2x + 1 =$ _____
- (29) 110 has _____ positive integral divisors.
- *(30) $29 \times 33 + 29 \times 66 =$ _____
- (31) $\frac{17}{14} =$ _____ % (mixed number)
- (32) $(23 \times 5 + 4) \div 7$ has a remainder of _____
- (33) A 6-element set has _____ proper subsets
- (34) 2 gallons equals _____ cubic inches
- (35) $21 \times 19 =$ _____
- (36) If $f(x) = 4x^2 - 4x + 1$, then $f(5) =$ _____
- (37) $3 + 6 + 9 + 15 + 24 + \dots + 102 + 165 =$ _____
- (38) If 4 notepads cost 18 cents then 18 notepads cost \$ _____
- (39) $(3 \times 19 + 20 \times 16) \div 6$ has a remainder of _____
- *(40) $13.6 \times 1248 \div 26 =$ _____
- (41) The perimeter of an equilateral triangle is 12 cm. Its area is $k\sqrt{3}$ cm². Find k . _____
- (42) The units digit of 17^5 is _____
- (43) $66 \div 0.1666\dots =$ _____
- (44) $48^2 - 42^2 =$ _____
- (45) $7 \times 5! - 6! =$ _____
- (46) If the side of an equilateral triangle is 12 cm, then its area is $k\sqrt{3}$ cm². Find k . _____

- (47) $15 \times 336 =$ _____
- (48) The units digit of 17^{17} is _____
- (49) The measure of an exterior angle of a regular n -gon is 18° . $n =$ _____ sides
- *(50) The volume of a right cylinder with a radius of 5" and a height of 6" is _____ cubic inches.
- (51) $\tan 30^\circ =$ _____
- (52) 18% of $266\frac{2}{3}$ is _____
- (53) If y varies inversely with x and $x = 4$ when $y = 3$, find x when $y = 8$. _____
- (54) $3 - 1 - \frac{1}{3} - \frac{1}{9} - \frac{1}{27} - \dots =$ _____
- (55) The sum of the roots $(2x + 5)^2 - 1 = 0$ is _____
- (56) ${}_5P_3 \div {}_5C_3 =$ _____
- (57) For what value of k does the sum of the roots of $3x^2 + kx - 7 = 0$ equal $\frac{4}{3}$? _____
- (58) How many ways can 6 people be seated 3 at a time in 3 chairs in a row? _____
- (59) $\sin\left(\frac{5\pi}{4}\right) \times \cos\left(\frac{5\pi}{4}\right) =$ _____
- *(60) The surface area of a regular octahedron whose edges are 20 cm is _____ cm^2
- (61) $\begin{bmatrix} 2 & -3 \end{bmatrix} \times \begin{bmatrix} 3 \\ -2 \end{bmatrix} = [\text{_____}]$
- (62) If $\begin{bmatrix} 1 & 3 \\ 1 & 2 \end{bmatrix} + \begin{bmatrix} 2 & 2 \\ 0 & 1 \end{bmatrix} = \begin{bmatrix} a & b \\ c & d \end{bmatrix}$, then $c + d =$ _____
- (63) If $\sqrt{12} + \sqrt{27} = \sqrt{x}$, then $x =$ _____
- (64) Find k , $0 \leq k \leq 7$ if $\frac{(5!)(3!)}{(4!)} \equiv k \pmod{8}$. _____
- (65) $21^2 - 20^2 + 19^2 - 18^2 =$ _____
- (66) $43_5 =$ _____ 7
- (67) $42_5 \times 4_5 =$ _____ 5
- (68) $\tan[\cot^{-1}(2.1)] =$ _____
- (69) The volume of a cone with radius 3 and height 4 is $b\pi$ and b is? _____
- *(70) $12 \times 13 \times 14 \times 15 =$ _____
- (71) Change $\frac{9}{16}$ to a base 4 decimal. _____
- (72) If $f(x) = 2x - 1$ and $g(x) = (2 - x)^2$, then $f[g(-1)] =$ _____
- (73) $\frac{1}{10} + \frac{1}{40} + \frac{1}{88} + \frac{1}{154} =$ _____
- (74) Change .44 base 5 to a base 10 fraction. _____
- (75) $\lim_{x \rightarrow \infty} \frac{2x - 3}{1 - x} =$ _____
- (76) If $f(x) = 4x - 3$, then $f^{-1}(2) =$ _____
- (77) $666 \times \frac{3}{27} =$ _____
- (78) $\int_1^2 (x + 1) dx =$ _____
- (79) $(33_5) \times (4_5) =$ _____ 5
- *(80) $779 \div 77\frac{7}{9}\% \times .75 =$ _____