

Number Sense Exam 046, 10/19/2017

- (1) $245 + 146 - 135 =$ _____
- (2) $3368 \div 11$ has a remainder of _____
- (3) $2007 \div 7 =$ _____ (mixed number)
- (4) $\frac{7}{80} =$ _____ % (decimal)
- (5) $17 - 19 + 21 - 23 =$ _____
- (6) $55 + (44 - 33) \times 22 \div 11 =$ _____
- (7) $12 \times 22 + 16 \times 22 =$ _____
- (8) $5566 \div 11 =$ _____
- (9) $25 \times 2.8 =$ _____
- *(10) $1836 + 1698 + 1912 + 1777 =$ _____
- (11) $24 \times 17 - 19 \times 17 =$ _____
- (12) $15 \times \frac{15}{17} =$ _____ (mixed number)
- (13) $11^3 =$ _____
- (14) $5\frac{1}{4} - 2\frac{2}{3} =$ _____ (mixed number)
- (15) $115 \times 105 =$ _____
- (16) Which is larger: $\frac{3}{7}$ or $.43$? _____
- (17) $43^2 =$ _____
- (18) $12^3 =$ _____
- (19) $22^2 =$ _____
- *(20) $419 \times 481 =$ _____
- (21) $4^{3/2} =$ _____
- (22) $325_6 =$ _____ ₁₀
- (23) $0.4166\dots - 0.0833\dots =$ _____
- (24) If $4x - 19 = 7 - 2x$, then $x =$ _____
- (25) $1 + 1 + 2 + 3 + 5 + 8 + \dots + 34 =$ _____
- (26) $111000_2 =$ _____ ₄
- (27) The area of a square with a diagonal of $3\sqrt{2}$ is _____ sq. units
- (28) If $f(x) = 4x^2 + 28x + 49$ then $f(19) =$ _____
- (29) $86^2 + 52^2 =$ _____
- *(30) $\sqrt{290} \times 129 =$ _____
- (31) $(3 \times 19 + 20 \times 16) \div 6$ has a remainder of _____
- (32) If $3.2 \times k = 1$, then $k =$ _____
- (33) If $\sqrt{125} - \sqrt{45} = \sqrt{x}$, then $x =$ _____
- (34) $2^2 \times 5^3 \times 3^3 =$ _____
- (35) $5 \times 4! + 20 \times 3! =$ _____
- (36) $27 \times 24 =$ _____
- (37) $6\frac{2}{5} \times 6\frac{3}{5} =$ _____ (mixed number)
- (38) If $x^3 = \sqrt{5x^5 + 5x^5 + 5x^5 + 5x^5 + 5x^5}$, where $x > 1$, then $x =$ _____
- (39) $5\frac{2}{3} \times 5\frac{1}{3} =$ _____ (mixed number)
- *(40) $\sqrt{959} + \sqrt{487} =$ _____
- (41) If $xy = 1$ and $x + y = 5$, then $x^3 + y^3 =$ _____
- (42) For $25x^2 - kx + 36 = 0$ to have equal roots, k has to have a value of _____
- (43) The leg opposite the 45° angle in a right triangle is $3\sqrt{2}$. The hypotenuse is _____
- (44) $120 \div 8.333\dots =$ _____
- (45) $54 \times 11 + 99 \times 6 =$ _____
- (46) $\frac{4}{25} - \frac{11}{76} =$ _____

- (47) The smallest integer x such that $x - 5 > -6$ is _____
- (48) For what value of k does $4x^2 - 12x + k = 0$ have equal roots? _____
- (49) $60^\circ\text{F} =$ _____ $^\circ\text{C}$
- *(50) $\sqrt{6420135} =$ _____
- (51) $(4 + 3i) \div 2i = a + bi$ and $b =$ _____
- (52) $(4 - i)(3 + 2i) = a + bi$. Find a . _____
- (53) $(2 - 5i)(3 - 4i) = a + bi$. Find $a - b$. _____
- (54) How many subsets containing only 4 elements does the set $\{d, e, c, i, m, a, l, s\}$ have? _____
- (55) $36^2 + 57^2 =$ _____
- (56) $\log_4 32 + \log_4 2 + \log_4 1 =$ _____
- (57) The smaller root of $x^2 + x - 12 = 0$ is _____
- (58) $114 \times 106 =$ _____
- (59) $77516 \div 11$ has a remainder of _____
- *(60) $22 \times 44 \times 88 =$ _____
- (61) If $\sin\left(\frac{\pi}{3}\right) = \cos(A)$, $A \in QI$, then $A =$ _ radians
- (62) $43_6 \times 5_6 =$ _____ ₆
- (63) If $\log 2 = .3$ and $\log 3 = .5$, then $\log 12 =$ _____ (decimal)
- (64) When two dice are roled, what is the probability that the sum is a factor of 9? _____
- (65) The slope of $\frac{2}{3}x - \frac{2}{5}y = 1$ is _____
- (66) $1 + 8 + 27 + 64 + 125 + 216 =$ _____
- (67) $(\sin 15^\circ \cos 45^\circ + \sin 45^\circ \cos 15^\circ)^2 =$ _____
- (68) How many hours are there from 6:30 am on March 2 to 4:15 pm on March 3? _____
- (69) How many minutes are there from 8:00 am to 3:45 pm in one day? _____
- *(70) $2\pi \times 2\pi \times 3\pi \times 3\pi =$ _____
- (71) If $f(x) = \frac{(3x + 2)}{(7x - 4)}$, the horizontal asymptote is $y =$ _____
- (72) The difference between the 5th and the 4th octagonal numbers is _____
- (73) Find x , $0 \leq x \leq 3$ if $24^2 \equiv x \pmod{5}$. _____
- (74) The volume of a sphere with a radius of 3 inches is $k\pi$ cubic inches. Find k . _____
- (75) $f(x) = \log(3x - 2)$ has an asymptote at $x =$ ____
- (76) If $f(x) = \frac{3x}{4} + 2$, then $f^{-1}(1) =$ _____
- (77) $\lim_{x \rightarrow 1} \frac{1}{2x} =$ _____
- (78) The distance between the line $3x - 4y = 6$ and the point $(5, 1)$ is _____
- (79) $35^2 + 36^2 =$ _____
- *(80) 6666 feet/second = _____ miles/hour