

Number Sense Exam 012, 2/17/2017

- (1) $1\frac{1}{8} \times 1.6 =$ _____ (decimal)
- (2) $2010 \div 11$ has a remainder of _____
- (3) $263 \div 5 =$ _____ (decimal)
- (4) $\frac{7}{8} \div .2 =$ _____ (improper fraction)
- (5) $3\frac{1}{4}\% =$ _____ (decimal)
- (6) $\frac{3}{5} \div \frac{21}{25} =$ _____
- (7) $244 \times 25 =$ _____
- (8) $105\% =$ _____ (improper fraction)
- (9) $\$17.97 + \$12.48 = \$$ _____
- *(10) $6002 + 602 + 206 - 2006 =$ _____
- (11) $3\frac{4}{5} \times 1\frac{2}{3} =$ _____ (mixed number)
- (12) The average of 18, 29, and 16 is _____
- (13) Which is smaller: $1\frac{1}{3}$ or 1.3? _____
- (14) $7 + 12 + 17 + 22 + \dots + 47 =$ _____
- (15) $(58 + 79 + 66) \div 4$ has a remainder of _____
- (16) $2700 \div 75 =$ _____
- (17) Which is larger, $-.27$ or $-\frac{2}{7}$? = _____
- (18) The sum of the first 4 odd prime numbers is _____
- (19) 2 cubic feet = _____ cubic inches
- *(20) $1357 \times 2468 =$ _____
- (21) $6 \times 6\frac{5}{6} =$ _____
- (22) The LCM of 32 and 72 is _____
- (23) If $f(x) = x^2 - 10x + 25$, then $f(37) =$ _____
- (24) $223355k$ is divisible by 9. Find k . _____
- (25) The smallest root of $x^2 + 2x = 24$ is _____
- (26) If $37^2 - 31^2 = 2y$ then $y =$ _____
- (27) 37.5% of a gallon is _____ pints
- (28) $(4)^{-1} \div (4)^{-2} \times (4)^{-3} =$ _____
- (29) The number of positive integral divisors of 44 is _____
- *(30) $27^2 \div 9^2 \times 18^2 =$ _____
- (31) $(9 + 15 \times 21) \div 8$ has a remainder of _____
- (32) If $\frac{1}{2} + \frac{1}{x} = \frac{2}{3}$, then $x =$ _____
- (33) $1 - |2 + |-3 + 4|| =$ _____
- (34) The mean of 33, 21, and 27 is _____
- (35) The set $\{L, U, C, A, S\}$ has _____ proper subsets
- (36) $2.8333\dots - 1.58333\dots =$ _____
- (37) $5 \times 4! + 20 \times 3! =$ _____
- (38) If $f(x) = 4x^2 - 12x + 9$ then $f(9) =$ _____
- (39) $|6 - |-3 - 6|| =$ _____
- *(40) $(375 \times 79)^2 \div (40 \times 124) =$ _____
- (41) $5 \times 10^3 \div 5^4 =$ _____
- (42) If A is 70% of B and B is 80% of C , then A is what percent of C ? _____ %
- (43) $18 \times 5! - 30 \times 4! =$ _____
- (44) An octahedron has _____ vertices
- (45) $45 \times 95 =$ _____
- (46) $5^3 \times 2^5 =$ _____
- (47) $7! \div 6! - 5! =$ _____

- (48) Let r , s , and t be the roots of the $2x^3 + 4x = 5$.
 $rs + rt + st$ equals _____
- (49) If $4^x = .125$, then $4^{2x} =$ _____
- *(50) $21^3 \times 15^2 \div 9^4 =$ _____
- (51) If x varies directly with y^3 and $x = 2$ when $y = 2$,
 find x when $y = 4$. $x =$ _____
- (52) ${}_6P_4 \div {}_6C_2 =$ _____
- (53) $\cos(-5\pi) =$ _____
- (54) $(4 - i)(3 + 2i) = a + bi$. Find a . _____
- (55) ${}_6C_3 =$ _____
- (56) The units digit of 33^{33} is _____
- (57) The smallest integer such that $4x + 3 > -2$ is _____
- (58) $(2 - 5i)(3 - 4i) = a + bi$. Find $a - b$. _____
- (59) The sides of a triangle are 4, 6, and x . The least
 value of x , where x is a natural number is _____
- *(60) $75^2 \div 25^3 \times 50^4 =$ _____
- (61) The simplified coefficient of the x^2y term in the
 expansion $(x - 4y)^3$ is _____
- (62) $2 + 5 + 8 + 11 + 14 + \dots + 44 =$ _____
- (63) $2 \sin 165^\circ \cos 165^\circ =$ _____
- (64) $666 \times \frac{2}{37} =$ _____
- (65) $33_6 \times 3_6 =$ _____ 6
- (66) $\sin \left[\sin^{-1} \left(\frac{1}{2} \right) \right] =$ _____
- (67) $1.5P = \frac{1}{5}Q$ and 40% of $Q = R$. R is ____ % of P .
- (68) The greatest integer function $f(x) = [x]$ has a
 value of _____ for $f(\pi)$
- (69) $(1 - \sin 60^\circ)(1 + \sin 60^\circ) =$ _____
- *(70) $2718281 \div 3141 =$ _____
- (71) $111 \times 27 =$ _____
- (72) $\lim_{x \rightarrow 2} \frac{x^2 - 4}{x - 2} =$ _____
- (73) If $f(x) = \sin(3x) + 4$, then $f'(\frac{\pi}{9}) =$ _____
- (74) If $f(x) = x^2 - 1$ and $x > 0$, then $f^{-1}(8) =$ _____
- (75) Change .21 base 5 to a base 10 decimal. _____
- (76) A vertical asymptote of $y = \frac{x^2 + 1}{x + 1}$ _____
- (77) $111 \times 1111 =$ _____
- (78) $\int_1^2 x^2 dx =$ _____
- (79) The horizontal asymptote of $y = \frac{x + 1}{x - 3}$ is _____
- *(80) $26^4 =$ _____