

Number Sense Exam 032, 7/21/2017

- (1) $20.07 - 2.007 =$ _____ (decimal)
- (2) $9 \times 6 \div 3 - 6 \times 9 =$ _____
- (3) $33^2 =$ _____
- (4) $1\frac{3}{8}\%$ = _____ (decimal)
- (5) $\frac{5}{6} =$ _____ % (mixed number)
- (6) $2(3) + 24(2) + 5(6) =$ _____
- (7) $.075 =$ _____ (fraction)
- (8) $2010 \div 25 =$ _____
- (9) $2015 \div .5 =$ _____
- *(10) $64 - 255 + 3077 - 1208 =$ _____
- (11) $7 + 12 + 17 + 22 + \dots + 47 =$ _____
- (12) 44 is what % of 80? _____ %
- (13) The largest prime divisor of 355 is _____
- (14) $45^2 =$ _____
- (15) $58\frac{1}{3}\% \times 3.6 =$ _____
- (16) 128 ounces = _____ cups
- (17) If 1 gram = .04 oz., then 4 oz. = _____ grams
- (18) MMX - II = _____ (Arabic Numeral)
- (19) $1 + 3 + 5 + \dots + 23 =$ _____
- *(20) $\sqrt{959} \times \sqrt{1091} =$ _____
- (21) $2 + 1 + 3 + 4 + 7 + \dots + 29 =$ _____
- (22) How far do you travel in one hour at 24 feet per minute? _____ feet
- (23) $11\frac{10}{11} \times 11 =$ _____
- (24) The number halfway between -12 and 62 on the number line is _____
- (25) What number times 3 gives twice the result of adding it to 7? _____
- (26) What number divided by 5 and added to 20 gives the same results? _____
- (27) $(72 \times 64 - 83) \div 7$ has a remainder of _____
- (28) If the area of a square is 72 sq. in., then the length of its diagonal is _____ in.
- (29) If $f(x) = 2x^3 - 6x^2 + 6x - 2$, then $f(4) =$ _____
- *(30) $421456 \div 1111 =$ _____
- (31) How many integers between 3 and 28 are relatively prime to 28? _____
- (32) The discriminant of $6x^2 + 7x + 2 = 0$ is _____
- (33) If $3^4 + 4^3 = 5x$, then $x =$ _____
- (34) Find the units digit of 13^7 . _____
- (35) $\{b, e, n, j, a\} \cap \{s, o, n, y, a\}$ has _____ elements
- (36) Find y if $y = 2x$ and $x + y = 36$. _____
- (37) If $A = \{b, l, u, e\}$ and $B = \{b, l, a, c, k\}$, then $A \cap B$ has how many elements? _____
- (38) How many subsets of the set $\{p, o, i, n, t\}$ are 2-element or 3-element subsets? _____
- (39) Given $9248 \div 34 = 272$. Find $9248 \div 8\frac{1}{2}$. _____
- *(40) $\sqrt[3]{1730} \times \sqrt{223} \times 18 =$ _____
- (41) The hypotenuse of an isosceles right triangle is $5\sqrt{2}$ cm. The area is _____ cm^2
- (42) How many integers less than 15 are relatively prime to 15? _____

- (43) $3\frac{1}{3} \times 1\frac{1}{5} =$ _____
- (44) The greatest integer x such that $3x + 8 < 4$ is _____
- (45) If $2 - 3x < 5$, then $4x >$ _____
- (46) If $3x + 5 = 2x - 4$ then $x =$ _____
- (47) The sides of a right triangle are integers. If one leg is 9, then the other leg is _____
- (48) 45 miles per hour = _____ feet per second
- (49) The measure of each of the interior angles of a regular pentagon is _____ degrees
- *(50) $\sqrt{12062014} =$ _____
- (51) $(4 - i)(3 + 2i) = a + bi$. Find a . _____
- (52) $(3 - 2i)^2 = a + bi$ and $a =$ _____
- (53) The point $(-2, -4)$ is reflected over the y -axis to the point (h, k) . Find k . _____
- (54) ${}_8C_4 =$ _____
- (55) The first 4 digits of the decimal of $\frac{43}{90}$ is 0. _____
- (56) $(2 + 7i)(2 - 7i) = a + bi$. Find $a + b$. _____
- (57) How many words real or imaginary can be formed using the letters W, I, E, N, E, R ? _____
- (58) $466\frac{2}{3}\%$ of 60 is _____
- (59) How much time has passed from 8:20 am to 3:50 pm the same day? _____ hours
- *(60) $(75 \times 75) \div (25 \times 25 \times 25) \times 150$ _____
- (61) $999 \times \frac{3}{37} =$ _____
- (62) If $\ln(x) = 2.3 \log(x)$, then $\ln 1000 =$ _____
- (63) $\sin^{-1}[\tan(\cot^{-1} 2)] =$ _____ degrees
- (64) $\log_4 27 \div \log_4 3 =$ _____
- (65) $21 \times 28 + 28 =$ _____
- (66) If $\log_x 81 = \log_2 16$ then $x =$ _____
- (67) Change 0.133... base 4 to a base 4 fraction. _____
- (68) $1(0!) + 2(1!) + 3(2!) + 4(3!) + 5(4!) =$ _____
- (69) How much time has passed from 8:30am to 3:45pm the same day? _____ hours
- *(70) $314 \times 27.2 \times 1.62 =$ _____
- (71) $\int_1^3 2x^3 dx =$ _____
- (72) If $f(x) = 3x - 4$, then $f^{-1}(5) =$ _____
- (73) If $f(x) = 2 + \frac{3}{4-x}$, then $f^{-1}(5) =$ _____
- (74) 267419 divided by 11 has a remainder of _____
- (75) The y -intercept of $y = (2x - 3)^2$ is (h, k) and $k =$ _____
- (76) Find the slope of the line tangent to $y = x^3 + x^2 + x + 1$ at $(-1, 0)$. _____
- (77) $\frac{1}{6} + \frac{1}{12} + \frac{1}{20} + \frac{1}{30} =$ _____
- (78) The polar coordinate of the rectangular coordinate $(3, \sqrt{7})$ is (r, θ) . Find $r > 0$. _____
- (79) $\lim_{x \rightarrow \infty} \left(\frac{3x - 5}{7x} \right) =$ _____
- *(80) $416.666... \times 1430 =$ _____