

Number Sense Exam 059, 2/16/2018

- (1) XLIV = _____ (Arabic Numeral)
- (2) $\frac{3}{5} \times \frac{5}{12} \div \frac{3}{4} =$ _____
- (3) The negative reciprocal of 13^{-1} is _____
- (4) $11 \times 37 =$ _____
- (5) $2009 + 209 - 29 =$ _____
- (6) If $\frac{1}{20} + x = \frac{3}{5}$, then $x =$ _____
- (7) $1776 + 2015 =$ _____
- (8) $1208 - 1342 =$ _____
- (9) $19 \times 17 + 11 \times 17 =$ _____
- *(10) $199 + 109 + 991 + 901 =$ _____
- (11) 21 is _____ % less than 35
- (12) Seven-eighths of 3 pounds is _____ ounces
- (13) $12 \div (5 - 1) + 3 \times 4 =$ _____
- (14) 128 ounces = _____ cups
- (15) $11235813 \div 6$ has a remainder of _____
- (16) $11^5 \div 121 =$ _____
- (17) The smallest palindrome greater than 121 is _____
- (18) The sum of the positive integral divisors of 48 is _____
- (19) $323 \times 13 =$ _____
- *(20) $419 \times 481 =$ _____
- (21) $13^2 + 39^2 =$ _____
- (22) $8\frac{1}{3}\%$ of 48% of 250 = _____
- (23) 43 base ten is equivalent to _____ base six
- (24) $11011_2 =$ _____ ₄
- (25) The sum of three consecutive even integers is 78.
Find the middle integer. _____
- (26) $123_8 =$ _____ ₁₀
- (27) 105 base ten is equivalent to _____ base 5
- (28) $|-1 - 1| - |2 - 3| - 5 \times |8| =$ _____
- (29) $24^2 + 72^2 =$ _____
- *(30) $16899 \div 129 =$ _____
- (31) $1234 \times 8 + 4 =$ _____
- (32) $7\frac{1}{6} \times 7\frac{5}{6} =$ _____ (mixed number)
- (33) If x is to 4 as 5 is to 9, then $x =$ _____
- (34) 48 inches per second is _____ feet per minute
- (35) $\frac{1}{100}$ of a mile = _____ yards
- (36) The length of a rectangle is 3 times the width.
If the perimeter is 48 inches, then the area of the rectangle is _____ sq. inches.
- (37) $1^2 + 1^2 + 2^2 + 3^2 + 5^2 =$ _____
- (38) Find k , if $4x^2 + kx + 1 = 0$ and the sum of the roots is $\frac{3}{2}$. $k =$ _____
- (39) 4 quarts = _____ ounces
- *(40) $16 \times 16 \times 16 \times 16 =$ _____
- (41) $15 \times 336 =$ _____
- (42) Let $(3.4)^5 \div (3.4)^{-2} = (3.4)^k$. Find k . _____
- (43) $2! \times 3! - 5! =$ _____
- (44) $\sqrt[3]{1061208} =$ _____
- (45) The cube root of 389017 is _____

- (46) The smallest integer x such that $x - 5 > -6$ is _____
- (47) If $(k^5 \div k^3)^2 \times k^{-1} = k^x$, then $x =$ _____
- (48) $2\frac{5}{8} + \frac{8}{5} =$ _____ (mixed number)
- (49) $14443 \times 29 =$ _____
- *(50) $19 \times 109 + 109 \times 21 =$ _____
- (51) The first 4 digits of $\frac{31}{90}$ is 0. _____
- (52) The product of the coefficients of $(a + b)^5$ is _____
- (53) The circle $x^2 + y^2 - 2x - 4y = 11$ has a radius of _____
- (54) $12 \times 7 + 2 =$ _____
- (55) The legs of a right triangle are 8 and 15. The length of the altitude to the hypotenuse is _____
- (56) If the midpoint of the line segment with endpoints $(3, 6)$ and $(5, 0)$ is $M(x, y)$, the $x =$ _____
- (57) The largest integer such that $2x - 2 \leq 2$ is _____
- (58) The coefficient of the xy^2 term when $(x + 2y)^3$ is expanded is _____
- (59) ${}_8C_4 =$ _____
- *(60) $58333 \div 777 \times 75 =$ _____
- (61) $41^3 - 40^3 =$ _____
- (62) $\sum_{k=1}^4 (k)^2 =$ _____
- (63) $204^2 =$ _____
- (64) $2 \sin \frac{\pi}{12} \cos \frac{\pi}{12} =$ _____
- (65) How many 3-digit numbers end in 8? _____
- (66) $111 \times 44 =$ _____
- (67) The sum of the reciprocals of all the positive divisors of 8 is _____
- (68) $\log_{12} 9 + \log_{12} 16 =$ _____
- (69) $44^2 - 47^2 + 50^2 - 53^2 =$ _____
- *(70) $(e\pi)^2 \times (\pi e)^2 =$ _____
- (71) The vertical displacement of $y = 5 \cos 4(x + 3) - 2$ is _____
- (72) If $f(x) = 3x + 2$, then $f^{-1}(-2) =$ _____
- (73) Change .22 base 7 to a base 10 fraction. _____
- (74) If $f(x) = 3x + 5x^2 - 7x^4$, then $f'(1) =$ _____
- (75) A number is randomly drawn from the set $\{1, 2, 3, 4, 5\}$. What is the probability that the number drawn is a factor of 6? _____ %
- (76) $(33_5) \times (4_5) =$ _____ 5
- (77) $\lim_{x \rightarrow 4} \left(\frac{x^2 + x - 20}{x - 4} \right) =$ _____
- (78) $38^2 - 37^2 + 36^2 - 35^2 + 34^2 - 33^2 =$ _____
- (79) The polar coordinate of the rectangular coordinate $(3, \sqrt{7})$ is (r, θ) . Find $r > 0$. _____
- *(80) $45678 \div 111 =$ _____