

Number Sense Exam 056, 1/26/2018

- (1) $12 \div 6 \times 3 - 5 \times 2 =$ _____
- (2) $\frac{3}{4} \times \frac{14}{15} =$ _____
- (3) $\frac{7}{9} =$ _____, % (mixed number)
- (4) $2005 + 5002 =$ _____
- (5) $\frac{1}{12} =$ _____ %
- (6) $1367 \div 5 =$ _____ (decimal)
- (7) $22.5\% =$ _____ (fraction)
- (8) $23 \times 23 =$ _____
- (9) $15 \times 28 =$ _____
- *(10) $44 + 444 + 4444 + 44444 =$ _____
- (11) If 11 cups cost \$13.31 then 5 cups cost \$ _____
- (12) The GCD of 52 and 78 is _____
- (13) The mean of 18, 22, 36, and 44 is _____
- (14) $1764 = 42 \times$ _____
- (15) If 1 cm. = .39 in., then 3 meters = _____ in.
- (16) Which is larger: .54 or $\frac{6}{11}$? _____
- (17) $85 \times 105 =$ _____
- (18) $65^2 =$ _____
- (19) $-2 + |-1| - |-3 - 4| =$ _____
- *(20) $\sqrt{8679} =$ _____
- (21) 37.5% of a gallon is _____ pints
- (22) 48 has _____ positive integral divisors
- (23) The sum of three consecutive integers is 63. The middle integer is _____
- (24) $13^2 =$ _____
- (25) If $f(x) = 2x^3 - 6x^2 + 6x - 2$, then $f(4) =$ _____
- (26) $95 \times 45 =$ _____
- (27) Round $\sqrt{5}$ to the nearest tenth. _____
- (28) $3.222\dots - 2.333\dots =$ _____
- (29) 45 is $2\frac{1}{2}\%$ of _____
- *(30) $\sqrt{290} \times 129 =$ _____
- (31) $(24 \times 12 + 2 \times 11) \div 7$ has a remainder of _____
- (32) If $a = 4$ and $b = 3$, then $(a - b)(a^2 + ab + b^2) =$ _____
- (33) How many integers divide 36? _____
- (34) $2.8333\dots =$ _____ (fraction)
- (35) The discriminant of $6x^2 + 7x + 2 = 0$ is _____
- (36) $321_6 + 20_6 - 15_6 =$ _____ ₆
- (37) The area of a square is equal to its perimeter. The length of one side is _____
- (38) If $x = 5$ and $y = 3$, then $9x^2 - 6xy + y^2 =$ _____
- (39) $91 \times 98 =$ _____
- *(40) $\sqrt[3]{1730} \times \sqrt{223} \times 18 =$ _____
- (41) The next term of the sequence 4, 11, 18, 25, ... is _____
- (42) If $32^x = 128$, then $x =$ _____
- (43) A is 25% less than B and B is 25% less than C . A is what % less than C ? _____ %
- (44) If $3x - 4 < 5$, then $2x <$ _____
- (45) $31 \times 4! + 36 \times 3! =$ _____

- (46) A pentagon has _____ distinct diagonals.
- (47) $221 \times 133 =$ _____
- (48) If the perimeter of a square is 35 units, then its area is _____ sq. units (mixed number)
- (49) If the GCD of x and 15 is 5, and their LCM is 60, then $x =$ _____
- *(50) $\sqrt{101761} =$ _____
- (51) The next term of 4, 7, 12, 19, 28, ... is _____
- (52) The probability of winning is 60%. The odds of losing is _____
- (53) $135 \times 152 =$ _____
- (54) $32_6 \div 5_6 \times 4_6 =$ _____₆
- (55) The sides of a triangle are 4, 6, and x . The least value of x , where x is a natural number is _____
- (56) $53 \times 53 + 50 \times 50 - 3 \times 3 =$ _____
- (57) Let $\frac{5!}{3!} = \frac{(x-1)!}{x!}$. Find x . _____
- (58) ${}_6C_4 =$ _____
- (59) $12\frac{1}{2}\%$ of 24 yards = _____ feet
- *(60) $75^2 \div 25^3 \times 50^4 =$ _____
- (61) A right triangle with integer sides has one leg of 17 units and a hypotenuse of _____
- (62) If the initial point of a vector is (2, 3) and the terminal point is (4, 5), then $\|v\|^2 =$ _____
- (63) Two cards are drawn from a standard deck of cards without replacement. What is the probability that both cards are Jacks? _____
- (64) The odds of losing are 4 to 7. The probability of winning is _____
- (65) If $\ln(16) = \ln(2) + k \ln(2)$, then $k =$ _____
- (66) $f(x) = 4x - 1$ and $g(x) = 2 + 3x$. $g(f(\frac{1}{2})) =$ _____
- (67) When tossing 5 coins, what is the probability of getting 3 heads? _____
- (68) $28^2 - 27^2 + 26^2 - 25^2 =$ _____
- (69) The slope of the line $3x - 2y = 5$ is _____
- *(70) $2152008 \div 3579 =$ _____
- (71) Change $\frac{13}{25}$ to a base 5 decimal. _____₅
- (72) $g(x) = 2x + 3$ and $h(x) = 2 - 3x$. $g(h(4)) =$ _____
- (73) A number is randomly drawn from the set {1, 2, 3, 4, 5}. What is the probability that the number drawn is a prime number? _____ %
- (74) $\sum_1^3 (x+1) =$ _____
- (75) $0.313131\dots_5 =$ _____₅ (proper fraction)
- (76) The minimum value of $\sin(2x) - 3$ is _____
- (77) The minimum value of $y = x^2 + 2x - 3$ is _____
- (78) $\int_0^3 (x^2) dx =$ _____
- (79) If $f(x) = x^4 + 4x^3 + 6x^2 + 4x + 1$, find $f(4)$. _____
- *(80) $898 \div 37.5\% \times \frac{1}{8} =$ _____