

Number Sense Exam 056, 1/19/2018

- (1) $14 \times 41 =$ _____
- (2) $313 \div 5 =$ _____ (decimal)
- (3) $2003 \times 111 =$ _____
- (4) $2004 - 4002 =$ _____
- (5) $\frac{5}{6} + \frac{5}{12} + \frac{5}{20} =$ _____ (fraction)
- (6) $50.05 - 8.49 =$ _____ (decimal)
- (7) $(5 + 10) \times 15 \div (20 - 25) =$ _____
- (8) $6 \div 2 \times 4 + 8 - 10 =$ _____
- (9) $12 \times 342 =$ _____
- *(10) $198 - 213 + 275 - 126 =$ _____
- (11) $235 \times 11 =$ _____
- (12) $\frac{3}{7} + \frac{7}{3} =$ _____
- (13) $9\frac{3}{4} \times 9\frac{1}{4} =$ _____ (mixed number)
- (14) 64 is what % more than 48? _____ %
- (15) The median of 7, 5, 3, and 2 is _____
- (16) 80% of $(80 + 80)$ is _____
- (17) $26 \times 62 =$ _____
- (18) $\frac{5}{6} + \frac{6}{5} =$ _____ (mixed number)
- (19) $28^2 =$ _____
- *(20) $412 \times 398 - 3000 =$ _____
- (21) $756453 \div 4$ has a remainder of _____
- (22) If $24^2 - 20^2 = 11k$, then $k =$ _____
- (23) $66^2 + 54^2 =$ _____
- (24) $\frac{3}{80} =$ _____ (decimal)
- (25) $7\frac{1}{7} \times 49\frac{1}{7} =$ _____ (mixed number)
- (26) If $x = 7$ and $y = 5$, then $x^2 - 2xy + y^2 =$ _____
- (27) $2583677k$ is divisible by 11. Find $k > 0$. _____
- (28) $9\frac{1}{3} \times 3\frac{1}{3} =$ _____ (mixed number)
- (29) The multiplicative inverse of $-\frac{2}{3}$ is _____
- *(30) $18^4 =$ _____
- (31) $\frac{(6!)(4!)}{(5!)(3!)} =$ _____
- (32) If $x - 3 = -5$ and $y - 1 = -3$, then $xy =$ _____
- (33) $44 \times \frac{47}{50} =$ _____
- (34) $12 \times 13 =$ _____
- (35) $39^2 - 38^2 =$ _____
- (36) $43_8 - 21_8 =$ _____ s
- (37) $3 + 7 + 10 + 17 + 27 + \dots + 115 + 186 =$ _____
- (38) $\sqrt{242 \times 18} =$ _____
- (39) Find b when $57_b = 52_{10}$. $b =$ _____
- *(40) $545 \times 449 =$ _____
- (41) If $4^{2x} = 25$, then $4^{3x} =$ _____
- (42) Let $a^3 \div a^4 \div a^5 = a^k$, where $a > 1$. $k =$ _____
- (43) $\frac{4}{11} - \frac{19}{56} =$ _____
- (44) $72 \times 11 + 99 \times 8 =$ _____
- (45) $\frac{7}{12} + \frac{5}{7} =$ _____ (mixed number)
- (46) The vertex of $y = x^2 - 2x - 4$ is (h, k) and $k =$ _____
- (47) If $5^{(x-1)} = 17.3$, then $5^x =$ _____
- (48) $\frac{7}{40} =$ _____ % (decimal)
- (49) $18 \times 5! - 30 \times 4! =$ _____

- *(50) $21^3 \times 15^2 \div 9^4 =$ _____
- (51) The smallest value x such that $|2x + 7| \leq 9$ is _____
- (52) $\frac{10 \times 9! - 10! \times 9}{9!} =$ _____
- (53) $(4 - 3i)(2 - i) = a + bi$. Find $a - b$. _____
- (54) $83 \times 87 - 21 =$ _____
- (55) Let $\frac{5!}{3!} = \frac{(x-1)!}{x!}$. Find x . _____
- (56) The conjugate of $6 + 8i$ is _____
- (57) A triangle has integral sides of 11, x , and 19. The largest value for x is _____
- (58) $333 \times \frac{9}{37} =$ _____
- (59) $54^2 + (35^2 - 19^2) =$ _____
- *(60) $3192016 \div 765 =$ _____
- (61) $f(x) = 5x^3 + 4x^2 + 3x - 2$ divided by $x + 1$ has a remainder of _____
- (62) $\begin{bmatrix} 1 & 1 \\ 2 & 3 \end{bmatrix} + \begin{bmatrix} 2 & 1 \\ 3 & 4 \end{bmatrix} = \begin{bmatrix} a & c \\ b & d \end{bmatrix}$. Find $b + c$. _____
- (63) $\log_2 [\log_3 (\log_2 512)] =$ _____
- (64) The sum of the coefficients of $(x - y)^3$ is _____
- (65) $\frac{8}{11} - \frac{23}{34} =$ _____
- (66) $\sqrt{4489} =$ _____
- (67) $f(x) = 4x - 1$ and $g(x) = 2 + 3x$. $g(f(\frac{1}{2})) =$ _____
- (68) The eleventh term of 3, 8, 13, 18, ... is _____
- (69) If $(\sqrt[4]{a^2})(\sqrt[3]{a}) = (\sqrt[n]{a^k})$, where n and k are relatively prime, then $n =$ _____
- *(70) $(1 + 2 + 3 + \dots + 29)^2 =$ _____
- (71) $\int_1^3 (x + 5) dx =$ _____
- (72) The 8th term of the Lucas sequence 2, 1, 3, 4, ... is _____
- (73) The fifth pentagonal number is _____
- (74) $6253718 \div 9$ has a remainder of _____
- (75) The volume of a sphere with a radius of 3 inches is $k\pi$ cubic inches. Find k . _____
- (76) Let $g(x) = 3 + 2x + x^2$. Find $g[g(-3)]$. _____
- (77) $13 \times \frac{13}{14} - 13 =$ _____
- (78) The probability of rolling a factor of 6 on a single die is _____
- (79) $\int_{-1}^2 (1 - x) dx =$ _____
- *(80) $44 \times 42 \div 54 \times 52 =$ _____