

Number Sense Exam 020, 4/7/2017

- (1) $1234 \div 5 =$ _____ (decimal)
- (2) $\frac{4}{5} + \frac{6}{7} =$ _____ (mixed number)
- (3) $34^2 =$ _____
- (4) $23^2 =$ _____
- (5) $\frac{3}{4} + \frac{5}{6} =$ _____ (mixed number)
- (6) $\$15.15 \times 4 = \$$ _____
- (7) $75 \times .84 =$ _____
- (8) $1212 + 2121 =$ _____
- (9) $13 \times 18 =$ _____
- *(10) $64 - 255 + 3077 - 1208 =$ _____
- (11) Which is larger, $\frac{8}{9}$ or $\frac{22}{25}$? = _____
- (12) $20 \div 4 - 2 \times 3 + 6 =$ _____
- (13) $CCVI \times V =$ _____ (Arabic Numeral)
- (14) $\frac{5}{7} + \frac{7}{5} =$ _____ (mixed number)
- (15) The mean of 17, 22, and 36 is _____
- (16) $DLV + MCDLV =$ _____ (Arabic Numeral)
- (17) 3 miles = _____ yards
- (18) $31 + 25 + 19 + 29 + 23 + 17 =$ _____
- (19) $1\frac{5}{7} + \frac{7}{5} =$ _____ (mixed number)
- *(20) $457689 \div 111 =$ _____
- (21) $.444\dots + .777\dots =$ _____
- (22) $4\frac{4}{5} \div 4 =$ _____
- (23) 3.5 pints = _____ quarts
- (24) 130 base ten is equivalent to _____ base 5
- (25) 2.5 centimeters = _____ (meters)
- (26) $24^2 - 6^2 =$ _____
- (27) $63^2 - 47^2 =$ _____
- (28) If $x - y = 6$ and $x + y = -6$, then $xy =$ _____
- (29) The number of positive integral divisors of 48 is _____
- *(30) $44832 \div 249 =$ _____
- (31) Set $A = \{m, e, n, t, a, l\}$ and set $B = \{m, a, t, h\}$. $A \cap B$ contains how many elements? _____
- (32) $96 \times 93 =$ _____
- (33) $5\frac{1}{3} \times 6\frac{1}{5} =$ _____ (mixed number)
- (34) If $f(x) = x^4 - 6x^2 + 9$, then $f(5) =$ _____
- (35) $24^2 + 8^2 =$ _____
- (36) If $x = 6$ and $y = 9$ then $x^2 + 2xy + y^2 =$ _____
- (37) $13 \times 13 \times 13 =$ _____
- (38) The smallest root of $2x^2 + 13x + 20 = 0$ is _____
- (39) If the area of a square is three times its perimeter, then one side equals _____
- *(40) $\sqrt{30976} =$ _____
- (41) $3^x = 9.17$, then $3^{x+1} =$ _____
- (42) $1 + 3 + 5 + 7 + \dots + 33 =$ _____
- (43) The product of the roots $(x + 5)^2 - 3 = 0$ is _____
- (44) 18% of $466\frac{2}{3} =$ _____
- (45) If $4^{2x} = 25$, then $4^{3x} =$ _____
- (46) If $8^x = 40$ then $8^{(x+1)} =$ _____
- (47) If $7^2 + b^2 = 25^2$, then $|b| =$ _____
- (48) $12 + 9 + 6\frac{3}{4} + 5\frac{1}{16} + \dots =$ _____

- (49) If $8^{(x+1)} = 24$, then $8^{(x+2)} =$ _____
- *(50) $15^3 \times 5^3 =$ _____
- (51) $15^2 - 14^2 + 13^2 - 12^2 =$ _____
- (52) ${}_6C_4 \div {}_6C_2 =$ _____
- (53) If $3^x = 1.2$ then $9^x =$ _____
- (54) $\sin\left(\frac{\pi}{3}\right) \div \cos\left(\frac{5\pi}{6}\right) =$ _____
- (55) $18^2 - 17^2 + 16^2 - 15^2 =$ _____
- (56) $43^2 + 26^2 =$ _____
- (57) The area of an isosceles right triangle with a hypotenuse length of $12\sqrt{2}$ cm is _____ cm^2
- (58) $\ln e^{10} \div \log 10^5 =$ _____
- (59) How many ordered pairs are in the Cartesian product of $\{1, 2, 3\}$ and $\{4, 5\}$? _____
- *(60) $4^2 \times 18^3 \div 24^2 =$ _____
- (61) $.7 \sin^2 30^\circ + .7 \cos^2 30^\circ =$ _____
- (62) If $(5 - 2)! \equiv x \pmod{5}$, where $0 \leq x \leq 5$, then $x =$ _____
- (63) $402^2 =$ _____
- (64) The greatest integer less than $12\sqrt{2}$ is _____
- (65) The volume of a right cylinder that is 9 in. high with a base radius 2 in. is _____ π cu. in.
- (66) How much time has passed from 11:35 am to 2:25 pm the same day? _____ minutes
- (67) The slope of the line $3x - 2y = 5$ is _____
- (68) If $f(x) = 3x - \log_2 x$, find $f(4)$ _____
- (69) $2[\cos(30^\circ)(\cos(30^\circ))] - 1 =$ _____
- *(70) $5.1^3 \times 7.9^3 =$ _____
- (71) $\lim_{x \rightarrow 0} \frac{e^x - 1}{x} =$ _____
- (72) The sum of the first nine terms of the Fibonacci sequence 1, 5, 6, 11, 17, ... is _____
- (73) 267419 divided by 11 has a remainder of _____
- (74) The 4-th pentagonal number is _____
- (75) Find k , $1 \leq k \leq 5$, if $2k + 3 \equiv 2 \pmod{9}$. _____
- (76) $11 \times \frac{11}{14} + 3 =$ _____ (mixed number)
- (77) The minimum value of $f(x) = (x + 2)^2 + 2$ is _____
- (78) $1^3 + 2^3 + 3^3 + \dots + 8^3 =$ _____
- (79) The minimum value of $\sin(3x) - 5$ is _____
- *(80) $639 \div 44\frac{4}{9}\% \times .125 =$ _____