

Number Sense Exam 034, 8/5/2017

- (1) $123 \times 9 + 5 =$ _____
- (2) $115 + 2013 =$ _____
- (3) $\frac{7}{10} \times \frac{5}{14} =$ _____
- (4) $3\frac{2}{5}\% =$ _____ (proper fraction)
- (5) $34^2 =$ _____
- (6) DCCXLIX = _____ (Arabic numeral)
- (7) $9\frac{1}{3}\% =$ _____ (proper fraction)
- (8) $18 + 15 \div 5 \times 9 =$ _____
- (9) $\frac{9}{10} \times 1\frac{2}{3} =$ _____
- *(10) $399 \times 308 + 125 =$ _____
- (11) $42 \times 24 =$ _____
- (12) $4\frac{1}{3}\%$ of 12 = _____ (decimal)
- (13) $3\frac{1}{3} \times 63 =$ _____
- (14) The multiplicative inverse of $\frac{7}{6}$ is _____
- (15) $9\frac{4}{9} + 8\frac{2}{3} =$ _____ (mixed number)
- (16) The simple interest on \$1800 at 6% for 4 months is \$ _____
- (17) $16 \times 7 - 14 \times 32 =$ _____
- (18) The multiplicative inverse of $-.62$ is _____
- (19) The average of 41, 62, and 80 is _____
- *(20) $509 \times \sqrt{905} =$ _____
- (21) 80 has _____ positive integral divisors
- (22) If $\frac{8}{x} = \frac{x}{10}$ and $x > 0$, then $x =$ _____
- (23) Sue drove 180 miles in 4.5 hours. Her average speed was _____ mph
- (24) $15 \times 11 \times 25 =$ _____
- (25) If 6 pens cost \$1.50 then 21 pens cost \$ _____
- (26) $12 \times 345 =$ _____
- (27) $36 \div 75 =$ _____ (decimal)
- (28) $72 \times 78 =$ _____
- (29) 86 base ten is equivalent to _____ base 5
- *(30) $\sqrt[3]{1092730} =$ _____
- (31) $112 \times 211 =$ _____
- (32) Given $32120 \div 15 = 2141\frac{1}{3}$, find $32120 \div 5$. _____
- (33) $7^8 \div 9$ has a remainder of _____
- (34) 48 inches per second is _____ feet per minute
- (35) $44^2 - 45^2 =$ _____
- (36) $54 \times 33 + 33 \times 26 =$ _____
- (37) $37 \times 43 =$ _____
- (38) $6\frac{2}{5} \times 4\frac{2}{5} =$ _____ (mixed number)
- (39) $43 \times 47 =$ _____
- *(40) $33 \times 44 \times 55 =$ _____
- (41) Find the geometric mean of 4 and 16. _____
- (42) The y -intercept of $6x - 2y = 8$ is (x, y) . $y =$ _____
- (43) If $8 \times 8^3 \div 8^k = 8^7$, then $k =$ _____
- (44) The side opposite 60° in a right triangle is $3\sqrt{3}$ units. The length of the other side is _____ units.

- (45) The exterior angle of a regular octagon contains _____ degrees
- (46) If $2^{-1} + x^{-1} = 8^{-1}$, then $x =$ _____
- (47) $93 \times 94 =$ _____
- (48) Find the slope of the line containing the points $(-5, 5)$ and $(3, -3)$. _____
- (49) $\frac{7}{20} - \frac{22}{59} =$ _____
- *(50) $12 \times 14 \times 16 =$ _____
- (51) $(3i - 2) \div (3i + 2) = a + bi$. $b =$ _____
- (52) $-11^2 + 10^2 - 9^2 + 8^2 - \dots - 1^2 =$ _____
- (53) $\frac{7\pi}{4}$ radians = _____ degrees
- (54) The area of $4x^2 + 9y^2 = 36$ is $k\pi$. $k =$ _____
- (55) $(4 - 7i)(4 + 7i) = a + bi$. Find $a + b$. _____
- (56) The simplified coefficient of the x^2y^2 term in the expansion of $(2x + y)^4$ is _____
- (57) If $\log_4(3x + 2) = 1$, then $x =$ _____
- (58) 12% of $433\frac{1}{3} =$ _____
- (59) $(1 - 2i)(3 + 4i) = a + bi$. Find b . _____
- *(60) $23 \times 34 + 43 \times 32 =$ _____
- (61) $12 \times \frac{13}{14} =$ _____ (mixed number)
- (62) $69^2 + 69 =$ _____
- (63) $\sin(\csc^{-1}(.6)) =$ _____
- (64) The eleventh term of $5, 9, 13, 17, \dots$ is _____
- (65) The slope of the line perpendicular to the line $2x - 4y = 3$ _____
- (66) The greatest integer function $g(x) = [3 - 2x]$ has a value of _____ for $g(\pi)$
- (67) $34 + 13 + 5 + 2 + 1 =$ _____
- (68) $\tan\left(\frac{\pi}{3}\right) \times \cot\left(\frac{\pi}{6}\right) =$ _____
- (69) The odds of losing is $\frac{14}{11}$. The probability of losing is _____
- *(70) $5.1^3 \times 7.9^3 =$ _____
- (71) If $\arcsin(\cos\left(\frac{\pi}{6}\right)) = k\pi$, then $k =$ _____
- (72) $1(1!) + 2(2!) + 3(3!) + \dots + 6(6!) =$ _____
- (73) How many regions in a plane are determined by 7 lines, no 2 are parallel and no 3 are concurrent? _____
- (74) The distance between the line $3x - 4y = 6$ and the point $(5, 1)$ is _____
- (75) $\lim_{x \rightarrow 2} \left(\frac{x^2 - 3x + 2}{x - 2} \right) =$ _____
- (76) $1(1!) + 2(2!) + 3(3!) + 4(4!) =$ _____
- (77) What is the probability when 4 coins are tossed of getting 3 tails and 1 head? _____
- (78) If $\sin \theta = 0.1$, then $\csc \theta =$ _____
- (79) The graph of $f(x) = \frac{(x^2 - 5x + 6)}{(x^2 - 4)}$ has a hole at $x =$ _____
- *(80) $44 \times 42 \div 54 \times 52 =$ _____