

## Middle School Number Sense Exam 021, 9/30/17

- (1)  $125 \times 0.08 =$  \_\_\_\_\_
- (2)  $\frac{3}{5} =$  \_\_\_\_\_ %
- (3)  $68\% =$  \_\_\_\_\_ (decimal)
- (4)  $394 \times 8 =$  \_\_\_\_\_
- (5)  $\frac{1}{8}$  of 19 = \_\_\_\_\_
- (6)  $\frac{1}{2}$  of 25 = \_\_\_\_\_
- (7)  $30\% =$  \_\_\_\_\_ (decimal)
- (8)  $93 \times 11 =$  \_\_\_\_\_
- (9)  $(14 + 70) \div 6 - 3^2 =$  \_\_\_\_\_
- \*(10)  $77777 + 7777 + 777 + 77 + 7 =$  \_\_\_\_\_
- (11)  $66\frac{2}{3} \times 81 =$  \_\_\_\_\_
- (12)  $13 \times 71 =$  \_\_\_\_\_
- (13)  $33\frac{1}{3} \times 18 =$  \_\_\_\_\_
- (14)  $\frac{4}{7} - \frac{1}{3} =$  \_\_\_\_\_
- (15) The mode of 1, 11, 11, 1, 1, 11, and 11 is \_\_\_\_\_
- (16)  $43 \times 6 =$  \_\_\_\_\_
- (17)  $997 \times 4 =$  \_\_\_\_\_
- (18)  $7 \times 1997 =$  \_\_\_\_\_
- (19)  $68 \times 75 =$  \_\_\_\_\_
- \*(20)  $3 \times 27 \times 52 =$  \_\_\_\_\_
- (21)  $4 + (-12) + 5 + (-7) =$  \_\_\_\_\_
- (22)  $33 \div 5\frac{1}{2} =$  \_\_\_\_\_
- (23) The sum of the smallest 11 positive even integers is \_\_\_\_\_
- (24)  $13 + 19 \div 6 + 11 \div 6 =$  \_\_\_\_\_
- (25)  $98 \times 94 =$  \_\_\_\_\_
- (26)  $5\frac{1}{8} - 2\frac{3}{4} =$  \_\_\_\_\_ (mixed number)
- (27)  $111^2 =$  \_\_\_\_\_
- (28) 2400 millimeters = \_\_\_\_\_ Dekaliters
- (29) 3 quarts = \_\_\_\_\_ ounces
- \*(30)  $\sqrt{43612} =$  \_\_\_\_\_
- (31)  $5 + 10 + 15 + \dots + 40 + 45 =$  \_\_\_\_\_
- (32) 28 has how many distinct prime divisors? \_\_\_\_\_
- (33) The GCF of 144 and 112 is \_\_\_\_\_
- (34)  $118 \times 103 =$  \_\_\_\_\_
- (35)  $5 - 6 \div 11 - 5 \div 11 =$  \_\_\_\_\_
- (36) If  $9(x - 5) = 72$ , then  $x =$  \_\_\_\_\_
- (37)  $11\frac{1}{7} \times 11\frac{6}{7} =$  \_\_\_\_\_ (mixed number)
- (38) The selling price of an \$80 item with a 30% markup is \$ \_\_\_\_\_
- (39) 109 nickels = \$ \_\_\_\_\_
- \*(40)  $13 \times 14 \times 15 =$  \_\_\_\_\_
- (41)  $2 + 3 + 4 + \dots + 20 =$  \_\_\_\_\_
- (42)  $1 + 3 + 5 + \dots + 23 + 25 =$  \_\_\_\_\_
- (43) The product of the LCM and GCF of 9 and 16 is \_\_\_\_\_
- (44) If  $f(x) = -20x + 1$ , then  $f(-.4) =$  \_\_\_\_\_
- (45)  $35_7 =$  \_\_\_\_\_ 10
- (46)  $21_{10} =$  \_\_\_\_\_ 9
- (47)  $13_{10} =$  \_\_\_\_\_ 4

- (48)  $\frac{39}{40} =$  \_\_\_\_\_ (decimal)
- (49) How many more subsets does the set  $\{a, b, c, d, e\}$  have than the set  $\{a, b, c\}$ ? \_\_\_\_\_
- \*(50)  $285714 \times 35 =$  \_\_\_\_\_
- (51) If  $f(x) = 2x^2 + x$ , then  $f(-2) =$  \_\_\_\_\_
- (52) The product of the LCM and the GCF of 6 and 15 is \_\_\_\_\_
- (53) The abscissa of the point (12, 16) after a dilation with a scale factor of  $\frac{1}{4}$  is \_\_\_\_\_
- (54)  $\sqrt{7744} =$  \_\_\_\_\_
- (55) The sum of the 12th and 13th triangular numbers is \_\_\_\_\_
- (56)  $18 \times \frac{21}{23} =$  \_\_\_\_\_ (mixed number)
- (57)  $19 \times \frac{19}{17} =$  \_\_\_\_\_ (mixed number)
- (58)  $39_{10} =$  \_\_\_\_\_ <sub>6</sub>
- (59)  $12\frac{1}{5} \times 8\frac{1}{5} =$  \_\_\_\_\_ (mixed number)
- \*(60)  $\sqrt{438} + \sqrt{107} =$  \_\_\_\_\_
- (61) If  $\sqrt{72}$  simplifies to  $a\sqrt{b}$ , then  $a =$  \_\_\_\_\_
- (62) The total number of diagonals that can be drawn in a decagon is \_\_\_\_\_
- (63)  $32_5 \times 2_5 =$  \_\_\_\_\_ <sub>5</sub>
- (64) The next term in the sequence 1, 5, 3, 10, 5, 15, 7, ... is \_\_\_\_\_
- (65)  $36^2 + 57^2 =$  \_\_\_\_\_
- (66) 37% of 900 is \_\_\_\_\_
- (67) The probability of obtaining a sum of 11 when rolling a pair of dice is \_\_\_\_\_
- (68) If  $(n - 6)(n + 6) = n^2 + an - 36$ , then  $a =$  \_\_\_\_\_
- (69) If (8, 3) is on the line  $3x - 5y = C$ , where  $C$  is a constant, then the  $x$ -intercept is \_\_\_\_\_
- \*(70)  $5\frac{4}{9} \times 8271 \div 7 =$  \_\_\_\_\_
- (71) The discriminant of  $-2x^2 + 3x + 4 = 0$  is \_\_\_\_\_
- (72)  $16^{1.25} =$  \_\_\_\_\_
- (73) The discriminant of  $2x^2 - 3x - 7 = 0$  is \_\_\_\_\_
- (74) The sum of the roots of  $5x^2 + 10x - 1 = 0$  is \_\_\_\_\_
- (75)  $52^2 + 15^2 =$  \_\_\_\_\_
- (76)  $49 \times 143 =$  \_\_\_\_\_
- (77) If  $(3x + 5)(2x - 1) = 6x^3 + bx - 5$ , then  $b =$  \_\_\_\_\_
- (78)  $i^{26} =$  \_\_\_\_\_
- (79) 240 has \_\_\_\_\_ unique prime factors
- \*(80)  $13 \times 15 \times 17 =$  \_\_\_\_\_