

# SHOOTOUT NUMBER SENSE

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## 2005-2006 HS Test 1

- (1)  $417 + 369 =$  \_\_\_\_\_.
- (2)  $\frac{1}{2} + \frac{5}{6} - \frac{3}{7} =$  \_\_\_\_\_.
- (3)  $16 \times 17 =$  \_\_\_\_\_.
- (4)  $11 \times 436 =$  \_\_\_\_\_.
- (5)  $.175 =$  \_\_\_\_\_ (Fraction).
- (6)  $340 \times 25 =$  \_\_\_\_\_.
- (7)  $908 \div 7 =$  \_\_\_\_\_ (Mixed Number).
- (8) Which is larger,  $\frac{3}{7}$  or  $\frac{9}{22}$ ? \_\_\_\_\_.
- (9)  $1931 - 4172 =$  \_\_\_\_\_.
- \* (10)  $411 + 787 + 923 + 1111 =$  \_\_\_\_\_.
- (11)  $15 \times \frac{15}{22} =$  \_\_\_\_\_ (Mixed Number).
- (12)  $5 + 9 + 13 + \dots + 81 =$  \_\_\_\_\_.
- (13)  $43^2 =$  \_\_\_\_\_.
- (14) 17% of 30 is \_\_\_\_\_.
- (15)  $\frac{9}{80} =$  \_\_\_\_\_ % (Decimal).
- (16) The additive inverse of  $\frac{3}{4}$  is \_\_\_\_\_.
- (17)  $3\frac{2}{3} - 5\frac{4}{5} =$  \_\_\_\_\_ (Mixed Number).
- (18) The LCM of 48, 64, and 72 is \_\_\_\_\_.
- (19) The range of 8, 12, 7, 19, and 26 is \_\_\_\_\_.
- \* (20)  $23 \times 909 =$  \_\_\_\_\_.
- (21)  $85 \times 35 =$  \_\_\_\_\_.
- (22)  $3\frac{2}{3} \times 9\frac{2}{3} =$  \_\_\_\_\_ (Mixed Number).
- (23) 96 has how many positive integral divisors? \_\_\_\_\_.
- (24)  $11011_2 =$  \_\_\_\_\_<sub>10</sub>.
- (25) If 3 pieces of gum cost 20 cents, four dozen pieces of gum cost \$ \_\_\_\_\_.
- (26)  $1511 \div 9$  has a remainder of \_\_\_\_\_.
- (27)  $.151515\dots =$  \_\_\_\_\_ (Fraction).
- (28)  $27^2 + 9^2 =$  \_\_\_\_\_.
- (29)  $83 \times 81 =$  \_\_\_\_\_.
- \* (30)  $14 \times 19 \times 21 =$  \_\_\_\_\_.
- (31) 10 gallons = \_\_\_\_\_ cubic inches.
- (32)  $6\frac{2}{3} \times 6\frac{1}{3} =$  \_\_\_\_\_ (Mixed Number).
- (33) The sum of the prime numbers less than 15 is \_\_\_\_\_.
- (34)  $512^{1/3} =$  \_\_\_\_\_.
- (35)  $(15 \times 22) - (28 \times 32) =$  \_\_\_\_\_.
- (36) If 8 is to x as 12 is to 15, then x = \_\_\_\_\_.
- (37) The sum of the roots of  $3x^2 - 2x + 4 = 0$  is \_\_\_\_\_.
- (38) 24% of \_\_\_\_\_ is 19.2% of 40.
- (39) If  $f(x) = 3x^2 - 4x - 8$ , then  $f(-1) =$  \_\_\_\_\_.
- \* (40)  $\sqrt{19111} =$  \_\_\_\_\_.
- (41) 707 centimeters = \_\_\_\_\_ kilometers.
- (42) If  $7x + 9 = 13$ ,  $7x - 11 =$  \_\_\_\_\_.

- (43) 45 miles per hour = \_\_\_\_\_ feet per second.
- (44)  $990 \times 998 =$  \_\_\_\_\_.
- (45) The next term of 3, 4, 6, 9, 14, 22, ... is \_\_\_\_\_.
- (46)  $51 \times 61 =$  \_\_\_\_\_.
- (47) If  $7^{x-1} = 24.1$ ,  $7^x =$  \_\_\_\_\_.
- (48) For  $3x^2 - 5x + k = 0$  to have two distinct real roots the largest value of k has to be less than \_\_\_\_\_.
- (49)  $6479 =$  \_\_\_\_\_ 3.
- \*(50)  $41 \times 49 + 41 \times 49 =$  \_\_\_\_\_.
- (51) A triangle has integral sides of 5, x, and 8. The largest possible value of x is \_\_\_\_\_.
- (52) Find the 19th term of 3, 7, 11, 15, 19, .... \_\_\_\_\_.
- (53)  $\cos 3\pi =$  \_\_\_\_\_.
- (54) 70 cubic centimeters = \_\_\_\_\_ cubic meters.
- (55) Find the mean of 4, 8, 1, 11, 9, 15. \_\_\_\_\_.
- (56) Find the slope of the line containing the points (2, -3) and (4, 6). \_\_\_\_\_.
- (57)  $(3i)^5 =$  \_\_\_\_\_.
- (58)  ${}_6P_4 =$  \_\_\_\_\_.
- (59) If  $\log_x 1024 = 5$ ,  $x =$  \_\_\_\_\_.
- \*(60)  $917134 \times 317 =$  \_\_\_\_\_.
- (61) If  $3 - x > x + 3$  then  $x <$  \_\_\_\_\_.
- (62) A bag has 2 red, 4 blue, and 5 white marbles. What is the probability of drawing a blue one on one random draw from the bag? \_\_\_\_\_.
- (63) Find  $f(9)$  if  $f(x) = \log_3 x - 2$ . \_\_\_\_\_.
- (64) The number of distinct diagonals of a six sided regular polygon is \_\_\_\_\_.
- (65)  $(9+8)^2 + (9^2 - 8^2) =$  \_\_\_\_\_.
- (66)  $10^{\log 5} =$  \_\_\_\_\_.
- (67)  $2 \cos^2 \pi =$  \_\_\_\_\_.
- (68) If  $h(x) = 4x^3 - 3$  and  $g(x) = 5x + 3$  then  $g(h(2)) =$  \_\_\_\_\_.
- (69)  $234 \times 34 =$  \_\_\_\_\_ 4.
- \*(70)  $e^5 =$  \_\_\_\_\_.
- (71)  $4111 \div 22$  has a remainder of \_\_\_\_\_.
- (72) If  $f(x) = 4x + 2$ , then  $f^{-1}(3) =$  \_\_\_\_\_.
- (73) If  $f(x) = 4x^3 - 3x^2 + 2$ , then  $f'(1) =$  \_\_\_\_\_.
- (74) If  $g(x) = 4 + 3x - 2x^2$  then the axis of symmetry is  $x =$  \_\_\_\_\_.
- (75)  $\frac{2}{9} + \frac{9}{2} - 4 =$  \_\_\_\_\_.
- (76) Change  $\frac{7}{25}$  to a base 5 decimal. \_\_\_\_\_.
- (77)  $\int_2^5 (2x) dx =$  \_\_\_\_\_.
- (78)  $1^5 + 2^4 + 3^3 + 4^2 + 5^1 + 6^0 =$  \_\_\_\_\_.
- (79)  $\lim_{x \rightarrow 5} \frac{2x^2 + 3x}{x - 5} =$  \_\_\_\_\_.
- \*(80)  $31 \times 91 \div 21 \times 41 =$  \_\_\_\_\_.

# SHOOTOUT NUMBER SENSE ANSWER SHEET

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## 2005-2006 HS Test 1

- |                       |                      |                            |                      |
|-----------------------|----------------------|----------------------------|----------------------|
| (1) 786               | (22) $35\frac{4}{9}$ | (43) 66                    | (64) 9               |
| (2) $\frac{19}{21}$   | (23) 12              | (44) 988020                | (65) 306             |
| (3) 272               | (24) 27              | (45) 35                    | (66) 5               |
| (4) 4796              | (25) 3.20            | (46) 3111                  | (67) 2               |
| (5) $\frac{7}{40}$    | (26) 8               | (47) 168.7                 | (68) 148             |
| (6) 8500              | (27) $\frac{5}{33}$  | (48) $\frac{25}{12}$       | (69) 201             |
| (7) $129\frac{5}{7}$  | (28) 810             | (49) 201121                | (70) 141 - 155       |
| (8) $\frac{3}{7}$     | (29) 6723            | (50) 3818 - 4218           | (71) 19              |
| (9) -2241             | (30) 5307 - 5865     | (51) 12                    | (72) $\frac{1}{4}$   |
| (10) 3071 - 3393      | (31) 2310            | (52) 75                    | (73) 6               |
| (11) $10\frac{5}{22}$ | (32) $42\frac{2}{9}$ | (53) -1                    | (74) $\frac{3}{4}$   |
| (12) 860              | (33) 41              | (54) .00007                | (75) $\frac{13}{18}$ |
| (13) 1849             | (34) 8               | (55) 8                     | (76) .12             |
| (14) 5.1              | (35) -566            | (56) $\frac{9}{2}$         | (77) 21              |
| (15) 11.25            | (36) 10              | (57) 243i                  | (78) 66              |
| (16) $-\frac{3}{4}$   | (37) $\frac{2}{3}$   | (58) 360                   | (79) 23              |
| (17) $-2\frac{2}{15}$ | (38) 32              | (59) 4                     | (80) 5233 - 5783     |
| (18) 576              | (39) -1              | (60) 276194905 - 305268051 |                      |
| (19) 19               | (40) 132 - 145       | (61) 0                     |                      |
| (20) 19862 - 21952    | (41) .00707          | (62) $\frac{4}{11}$        |                      |
| (21) 2975             | (42) -7              | (63) 0                     |                      |