CONTESTANT ID #: _____

GRADE LEVEL :_____

Place Contestant ID label here AFTER grading

PSIA

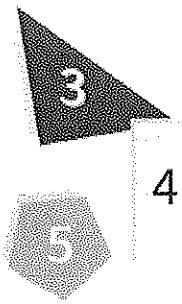
25 YEARS

Inspiring Student Achievement

Number Sense

District Contest

Grades 4-5



2022

Grader #1 Score: _____

Grader #2 Score: _____

Grader #3 Score: _____

FINAL SCORE: _____

(Please do not open test until the signal is given to begin.)

1. $38 - 24 =$ _____
2. $17 + 89 =$ _____
3. $18 \times 2 =$ _____
4. $27 + 27 + 27 =$ _____
5. $90 - 67 + 13 =$ _____
6. Round 4893 to the nearest ten's place. _____
7. $30 \div 5 =$ _____
8. $700 - 250 - 250 =$ _____
9. $738 + 99 =$ _____

* 10. $51234 + 23978 - 17973 =$ _____

11. XXIII = _____ (Arabic numerals)
12. What is the largest 3-digit number that has a "7" in the ten's digit? _____
13. $11 \times 15 =$ _____
14. $2022 - 1476 =$ _____
15. $300 + 30 + 330 + 303 =$ _____
16. $70 \times 30 =$ _____
17. $100 \div 4 =$ _____
18. How many even numbers are there between 11 and 23? _____
19. The remainder when 237 is divided by 5 is _____

* 20. $407 \times 298 =$ _____

21. $27 + 3 \times 2 =$ _____
22. $\frac{7}{8} \times \frac{4}{5} =$ _____
23. The LCM of 18 and 20 is _____
24. $4.35 + 3.45 =$ _____ (decimal)
25. Which is smaller: $\frac{1}{5}$ or $\frac{3}{14}$? _____
26. 2 gallons = _____ quarts
27. $49 \times 51 =$ _____
28. $18 \div 24 =$ _____ (fraction)
29. $65\% =$ _____ (fraction)

* 30. $184734 \div 196 =$ _____

31. 1.575 kilometers = _____ meters
32. The only prime number between 90 and 100 is _____
33. $408 \div 102 =$ _____
34. $(16 + 8) \times 5 =$ _____
35. $7.2 \times 0.04 =$ _____ (decimal)
36. Each peach costs 63¢. How much will 9 peaches cost? $ _____
37. Kenny had 48 carnival tickets. He spent 16 of them. What fraction of his tickets remains? _____ (fraction)
38. $\frac{1}{12} + \frac{7}{12} - \frac{5}{12} =$ _____ (fraction)
39. $79 \times 12 =$ _____

* 40. $\sqrt{245025} =$ _____

41. If $c = 4$, then $3c - 2 =$ _____

42. $5\frac{1}{3} \times 1\frac{1}{3} =$ _____ (mixed number)

43. 9 quarters + 8 dimes = $ _____

44. $\frac{12}{25} \div \frac{3}{5} =$ _____

45. If $F = \{f, i, r, s, t\}$ and $S = \{s, e, c, o, n, d\}$, how many elements are in $F \cup S$? _____

46. $53^2 - 52^2 =$ _____

47. The area of a rectangle is 108 cm^2. Its width is 4 cm. Its length is _____ cm

48. $1\frac{5}{6}$ feet = _____ inches

49. 34 (base 8) = _____ (base 10)

* 50. $21\frac{1}{2} \times 31\frac{1}{2} =$ _____

51. The 12th term in the sequence 1, 3, 5, 7, ... is _____

52. $47^2 =$ _____

53. 50% of 44 is _____

54. $6\frac{2}{7} \times 6\frac{5}{7} =$ _____ (mixed number)

55. Each wooden plank is 1.75 inches thick. How tall is a stack of 44 planks? _____ inches

56. $\frac{9}{11} + \frac{11}{9} =$ _____ (mixed number)

57. $2592 \div 4 =$ _____

58. $47 \times 111 =$ _____

59. A circle has a radius of 18 inches. Its circumference is $k\pi$ cm and $k =$ _____

* 60. $583 \times 359 =$ _____

61. $(-4)^3 =$ _____

62. $\frac{1}{7} - \frac{1}{9} =$ _____

63. $104 \times 108 =$ _____

64. $\frac{33 - 5 \times 5}{4} =$ _____

65. How many diagonals does a regular hexagon have? _____

66. $15^2 + 45^2 =$ _____

67. A parallelogram has base of 12 yd and a height of 15 yd. Its area is _____ yd^2

68. A pizza normally costs $16.00. It is on sale for 25% off. Its sale price is $ _____

69. $12 - 18 + 24 - 30 + 36 - 42 =$ _____

* 70. $445 \div 0.0725 =$ _____

71. $35_9 + 48_9 =$ _____ 9

72. $\sqrt{2809} =$ _____

73. How many positive integral divisors does 20 have? _____

74. $3 \times 7 \times 12 \times 37 =$ _____

75. Tiles numbered 1 through 8 are in a hat. A tile is drawn. What is the probability the number is odd? _____

76. $625 \times 48 =$ _____

77. $6\frac{2}{3} \div 7\frac{1}{2} =$ _____ (fraction)

78. How far is −21 from −8 on a number line? _____

79. The multiplicative inverse of 8 is _____ (decimal)

* 80. $27 \times 93 \div 1.333 =$ _____

For each estimation problem, the exact value (rounded to two decimal places) appears in square brackets.

(1) 14

(2) 106

(3) 36

(4) 81

(5) 36

(6) 4890

(7) 6

(8) 200

(9) 837

***(10)** 54378 – 60100 [57239]

(11) 23

(12) 979

(13) 165

(14) 546

(15) 963

(16) 2100

(17) 25

(18) 6

(19) 2

***(20)** 115222 – 127350 [121286]

(21) 33

(22) $\frac{7}{10}$; .7

(23) 180

(24) 7.8

(25) $\frac{1}{5}$; .2

(26) 8

(27) 2499

(28) $\frac{3}{4}$

(29) $\frac{13}{20}$

***(30)** 896 – 989 [942.52]

(31) 1575

(32) 97

(33) 4

(34) 120

(35) .288

(36) 5.67

(37) $\frac{2}{3}$

(38) $\frac{1}{4}$

(39) 948

***(40)** 471 – 519 [495]

(41) 10

(42) $7\frac{1}{9}$

(43) 3.05

(44) $\frac{4}{5}$; .8

(45) 10

(46) 105

(47) 27

(48) 22

(49) 28

***(50)** 644 – 711 [677.25]

(51) 23

(52) 2209

(53) 22

(54) $42\frac{10}{49}$

(55) 77

(56) $2\frac{4}{99}$

(57) 648

(58) 5217

(59) 36

***(60)** 198833 – 219761 [209297]

(61) −64

(62) $\frac{2}{63}$

(63) 11232

(64) 2

(65) 9

(66) 2250

(67) 180

(68) 12.00

(69) −18

***(70)** 5832 – 6444 [6137.93]

(71) 84

(72) 53

(73) 6

(74) 9324

(75) $\frac{1}{2}$; .5

(76) 30000

(77) $\frac{8}{9}$

(78) 13

(79) .125

***(80)** 1790 – 1977 [1883.72]