Do NOT unfold this paper until

the Contest Director

gives you permission to do so!

THE UNIVERSITY INTERSCHOLASTIC LEAGUE

Slide Rule Contest

Number 107

Conference: .....

Contestant's Serial Number: .....

Date of Contest: .....

Location of Contest: .....

Contestant's Net Score: .....

THE UNIVERSITY INTERSCHOLASTIC LEAGUE
DISTRICT SLIDE RULE CONTEST
Number 107

Instructions: Place your answers in blanks provided to the right of each problem. Be sure to indicate the position of the decimal in your answer. Any problem that is skipped will be counted wrong.

1. 3.84×0.0127 equals ----------> .....

2. 63.2×7.37 equals ----------> .....

3. 91.7×0.316 equals ----------> .....

4. 0.0817×0.326 equals ----------> .....

5. 43.7×331 equals ----------> .....

6. $\frac{7.93 \times 387}{3.18}$ equals ----------> .....

7. $\frac{31.5 \times 304}{27.6}$ equals ----------> .....

8. $\frac{47.2 \times 7.42}{427}$ equals ----------> .....

9. $\frac{3.82 \times 4.95}{7.62}$ equals ----------> .....

10. $\frac{167 \times 991}{343}$ equals ----------> .....

11. $\frac{187 \times \sqrt{712}}{0.376}$ equals ----------> .....

12. $\frac{371 \times 0.0172}{3/32}$ equals ----------> .....

13. $\frac{0.127 \times 331 \times 0.0421}{904 \times 8.73}$ equals ----------> .....

14. $\frac{804 \times 9.61}{317 \times 5.07 \times 121}$ equals ----------> .....

15. $\frac{37\pi \times 976}{3,180}$ equals ----------> .....

16. $\frac{(917)^2 \times \sqrt{370}}{\sqrt{114} \times (321)^2}$ equals ----------> .....

17. $\frac{217 \times (910)^2}{114 \times \sqrt{814}}$ equals ----------> .....

18. $\dfrac{(0.216)^2 \times \sqrt{306}}{940}$ equals ----------> .....

19. $\dfrac{(317)^2 \times \sqrt{613}}{692 \times 0.402}$ equals ----------> .....

20. $\dfrac{3\pi \times (121)^2}{\sqrt{511} \times 88.1}$ equals ----------> .....

21. $\dfrac{302 \times \sqrt{171} \times 64.2}{(191)^2 \times 0.0173}$ equals ----------> .....

22. $\dfrac{(37\pi)^3 \times 94.1}{318 \times \sqrt[3]{604}}$ equals ----------> .....

23. $\dfrac{\sqrt[3]{19\pi} \times 0.127}{\sqrt{716} \times 0.0231 \times 24.1}$ equals ----------> .....

24. $\dfrac{\sqrt{52.1} \times 0.00126 \times 13.0}{171 \times \sqrt[3]{175} \times 321}$ equals ----------> .....

25. $\dfrac{\sqrt{(61.2)^3}}{142 \times \sqrt[3]{(21.2)^2}}$ equals ----------> .....

26. $\dfrac{\sqrt[3]{311} \times \sqrt[3]{51.7}}{\sqrt{304}}$ equals ----------> .....

27. $\dfrac{(193)^2 \times \sqrt[3]{0.135}}{\sqrt{711} \times (19.1)^3}$ equals ----------> .....

28. $\dfrac{(304)^2 \times \sqrt[3]{71.2}}{\sqrt{216\pi}}$ equals ----------> .....

29. $\dfrac{913 \times (17.1)^2 \times \sqrt{7.04}}{\sqrt{317} \times (1.02)^3}$ equals ----------> .....

30. $\dfrac{\sqrt{\pi} \times \sqrt[3]{(11.1)^2} \times 194}{\left(\sqrt{4.11}\right)^2 \times 9.88}$ equals ----------> .....

31. $\sqrt[3]{(70.2)^2 \times \pi}$ equals ----------> .....

32. $\sqrt{\dfrac{88 \times 4.1\pi^2}{31 \times \sqrt{0.317} \times (5.21)^2}}$ equals ----------> .....

33. $\dfrac{321 \times \sqrt{871} \times (24.1)^2}{\sqrt{8.71}}$ equals ----------> .....

34. $\dfrac{(117)^2 \times \pi^3 \times (94.6)^2}{(0.123)^3}$ equals ----------> .....

35. $\sqrt{\dfrac{\sqrt{4.35} \times (51.7)^2 \times \sqrt{37.4}}{\sqrt{9.21} \times \pi \times (1.03)^2}}$ equals ------> .....

36. $\dfrac{\sqrt{618}}{\sqrt[3]{853}} \times \dfrac{\pi^2}{62.9} \times \dfrac{\sqrt[3]{74.6}}{\sqrt{9.13}}$ equals -------> .....

37. $\sqrt[3]{0.0393} \times \left(\dfrac{395}{537}\right)^3 \times \sqrt{4.68}$ equals ------> .....

38. $\sqrt[3]{\dfrac{1}{17\pi} \times \sqrt{0.393} \times \dfrac{1}{\sqrt{59.1}}}$ equals ------> .....

39. $\dfrac{(18)^3 \times 0.00000171}{0.0824 \times (0.011)^2 \times \sqrt[3]{518}}$ equals ----------> .....

40. $\sqrt[3]{(0.0000385)^2} \times \left(\dfrac{4.18}{9.40}\right)^3$ equals ---------> .....

41. $\sqrt[3]{\dfrac{(21.7)^2}{\sqrt{803}}}$ equals ----------> .....

42. $\dfrac{\sqrt{750\pi} \times \pi \times 3.14 \times (41.3)^2}{3.16 \times 5.27}$ equals ------> .....

43. $\dfrac{\sqrt{717} \times \sqrt{\dfrac{169}{(48)^2}}}{\dfrac{1}{\sqrt{919}} \times \sqrt[3]{25.7}}$ equals ----------> .....

44. $\left(\sqrt[3]{\dfrac{\sqrt{391 \times 0.251}}{\sqrt[3]{91.3}}}\right)^2$ equals ----------> .....

45. $\dfrac{9.68 \times \sqrt{0.0000713} \times \sqrt[3]{316}}{\sqrt{61.5}}$ equals ---------> .....

46. $\dfrac{(311)^2 \times \sqrt{9.04} \times (318)^3}{\sqrt[3]{71.6} \times 435\pi}$ equals ----------> .....

47. $\dfrac{(89.2)^3 \times \sqrt{\sqrt{91.6}}}{\sqrt{(11.3)^2}}$ equals ----------> .....

48. $\dfrac{\sqrt{\frac{513}{318}} \times \pi^2 \times 0.00000318}{(311)^2 \times 813}$ equals ----------> .....

49. $\dfrac{(9.32)^2 \times \sqrt{8.71}}{\sqrt[3]{7.86 \times 4.55}} \times \dfrac{4}{\pi}$ equals ----------> .....

50. $\sqrt[3]{\left(\dfrac{8820}{612000}\right)^2}$ equals ----------> .....

51. $0.0765 \times \dfrac{(3.11)^2 \times 98.7}{\sqrt{20.4} \times 181}$ equals ----------> .....

52. $\dfrac{\sqrt[3]{0.00000321}}{\sqrt[3]{\pi^2}}$ equals ----------> .....

53. $\dfrac{(3.11)^2 \times \sqrt{9 \times 41} \times \sqrt{5.12}}{88.0 \times 13.2}$ equals ----------> .....

54. $\dfrac{\dfrac{\sqrt{948} \times \sqrt{112} \times \sqrt{103}}{\sqrt[3]{406}}}{\dfrac{\sqrt[3]{114}}{\sqrt{0.0171} \times \sqrt{0.184}}}$ equals ----------> .....

55. $\sqrt{\frac{942}{315}} \times \sqrt[3]{\frac{304}{115}} \times 0.0183$ equals ----------> .....

56. $\left[\dfrac{\sqrt[3]{927} \times \sqrt{121}}{304 \times \sqrt{156} \times (5.07)^3}\right]^2$ equals ----------> .....

57. $\frac{407}{816} \times \frac{1}{8.91} \times \left(\frac{311}{\pi}\right)^3 \times (16.1)^2$ equals ------> .....

58. $\dfrac{\sqrt{866 \times 7.59}}{\sqrt[3]{26.5 \times 93.7 \times 6.44}}$ equals ----------> .....

59. $\dfrac{\sqrt{\frac{300}{490}} \times \sqrt{95}}{\sqrt{18}} \times \left(\frac{95}{18\pi}\right)^2$ equals -----> .....

60. $\left(\sqrt{\frac{8.84\ \pi}{\sqrt{8.84\ \pi}}}\right)^3 \times \left(\sqrt{\frac{91.7\ \pi}{\sqrt{9170\ \pi}}}\right)^3$ equals ----> .....

61. $\frac{(318 \times 9.35)^2}{\sqrt[3]{574 \times 36.8 \times 75.9}}$ equals ----------> .....

62. $38.7 \times \sqrt[3]{\frac{(0.0327)^2}{439}} \times 3.71$ equals --------> .....

63. $\sqrt[3]{3.71} \times \sqrt{84.5} \times \frac{\sqrt{7.11}}{\sqrt[3]{1.17}}$ equals --------> .....

64. $\frac{\sqrt[3]{318\ \pi^2 \times \pi^2}}{\sqrt{62.9 \times (0.384)^2 \times 2.80}}$ equals ----------> .....

65. $\sqrt{\sqrt[3]{\frac{29 \times \sqrt{0.83}}{608 \times \sqrt{83.0}}}}$ equals ----------> .....

66. $\sqrt{\frac{571 \times 18\ \pi \times 5.32}{188 \times 345}}$ equals ----------> .....

67. $\sqrt{\sqrt{\sqrt[3]{0.0000385\ \pi}}}$ equals ----------> .....

68. $\frac{1}{\pi} \times \sqrt{\frac{(0.322)^3}{439}} \times \sqrt[3]{4.25}$ equals -------> .....

69. $\frac{\sqrt[3]{8.21} \times \sqrt{\frac{914}{25\ \pi} \times 1.08} \times \frac{94}{17}}{\sqrt{\frac{1/5}{2}}}$ equals ----> .....

70. $\frac{8.82 \times \frac{3\ \pi}{\sqrt{4.75}} \times \sqrt{0.000317}}{\sqrt{\sqrt[3]{2.22}}}$ equals ------> .....

71. $\frac{\frac{\sqrt{4.75}}{\sqrt[3]{\pi}} \times \sqrt{0.000712} \times 8.74}{\sqrt{\sqrt[3]{6.15}}}$ equals -------> .....

72. $\sqrt{\frac{1085}{5176}} \times \sqrt[3]{\frac{7060}{184}} \times \left(\frac{125}{\sqrt{342}}\right)^2$ equals --> .....

73. $\sqrt{\sqrt[3]{\sqrt{91.6}}} \times \sqrt[3]{\sqrt{\sqrt[3]{61.9}}}$ equals ----> .....

74. $\sqrt{\left(\frac{156}{248}\right)^3} \times \sqrt[3]{\left(\frac{381}{152}\right)^2} \times \sqrt[3]{\frac{(149)^2 \times \sqrt{171}}{\sqrt{19} \times (104)^2}}$ equals> .....

75. $\sqrt{\frac{388 \times 883}{(171 \times 243)^3}} \times \frac{\sqrt{0.000316}}{\sqrt[3]{1480}}$ equals ------> .....

ANSWER KEY TO DISTRICT SLIDE RULE TEST #107

1. 0.0488 (0.0486 to 0.0490)
2. 466 (464 to 468)
3. 29.0 (28.8 to 29.2)
4. 0.0266 (0.0264 to 0.0268)
5. 1.45×10^4 (1.43×10^4 to 1.47×10^4)
6. 965 (963 to 967)
7. 347 (345 to 349)
8. 0.820 (0.818 to 0.822)
9. 2.48 (2.46 to 2.50)
10. 482 (480 to 484)
11. 1.33×10^4 (1.31×10^4 to 1.35×10^4)
12. 68.0 (67.8 to 68.2)
13. 2.25×10^{-4} (2.23×10^{-4} to 2.27×10^{-4})
14. 0.0397 (0.0395 to 0.0399)
15. 35.7 (35.5 to 35.9)
16. 14.7 (14.5 to 14.9)
17. 5.52×10^4 (5.50×10^4 to 5.54×10^4)
18. 8.68×10^{-4} (8.66×10^{-4} to 8.70×10^{-4})
19. 8.93×10^3 (8.91×10^3 to 8.95×10^3)
20. 69.2 (69.0 to 69.4)
21. 402 (400 to 404)
22. 5.49×10^4 (5.47×10^4 to 5.51×10^4)
23. 0.0333 (0.0331 to 0.0335)
24. 3.85×10^{-7} (3.83×10^{-7} to 3.87×10^{-7})
25. 0.440 (0.438 to 0.442)
26. 1.45 (1.43 to 1.47)
27. 0.103 (0.101 to 0.105)
28. 1.47×10^4 (1.45×10^4 to 1.49×10^4)
29. 2.71×10^4 (2.69×10^4 to 2.73×10^4)
30. 42.2 (42.0 to 42.4)
31. 24.9 (24.7 to 25.1)
32. 2.74 (2.72 to 2.76)
33. 1.86×10^6 (1.84×10^6 to 1.88×10^6)
34. 2.04×10^{12} (2.02×10^{12} to 2.06×10^{12})
35. 58.1 (57.9 to 58.3)
36. 0.573 (0.571 to 0.575)
37. 0.292 (0.290 to 0.294)
38. 0.115 (0.113 to 0.117)
39. 125 (123 to 127)
40. 1.00×10^{-3} (0.998×10^{-3} to 1.02×10^{-3})
41. 2.56 (2.54 to 2.58)
42. 4.90×10^4 (4.88×10^4 to 4.92×10^4)
43. 74.4 (74.2 to 74.6)
44. 1.69 (1.67 to 1.71)
45. 0.0710 (0.0708 to 0.0712)
46. 1.65×10^9 (1.63×10^9 to 1.67×10^9)
47. 1.94×10^5 (1.92×10^5 to 1.96×10^5)
48. 5.06×10^{-13} (5.04×10^{-13} to 5.08×10^{-13})
49. 36.2 (36.0 to 36.4)
50. 0.0590 (0.0588 to 0.0592)
51. 0.0892 (0.0890 to 0.0894)
52. 6.87×10^{-3} (6.85×10^{-3} to 6.89×10^{-3})
53. 0.362 (0.360 to 0.364)
54. 5.17 (5.15 to 5.19)
55. 0.0436 (0.0434 to 0.0438)
56. 4.69×10^{-8} (4.67×10^{-8} to 4.71×10^{-8})
57. 1.41×10^7 (1.39×10^7 to 1.43×10^7)
58. 3.22 (3.20 to 3.24)
59. 5.08 (5.06 to 5.10)
60. 26.4 (26.2 to 26.6)
61. 7.56×10^4 (7.54×10^4 to 7.58×10^4)
62. 1.93 (1.91 to 1.95)
63. 36.1 (35.9 to 36.3)
64. 6.16 (6.14 to 6.18)
65. 0.410 (0.408 to 0.412)
66. 1.63 (1.61 to 1.65)
67. 0.605 (0.603 to 0.607)
68. 4.50×10^{-3} (4.48×10^{-3} to 4.52×10^{-3})
69. 125 (123 to 127)
70. 0.595 (0.593 to 0.597)
71. 0.257 (0.255 to 0.259)
72. 70.6 (70.4 to 70.8)
73. 1.83 (1.81 to 1.85)
74. 1.68 (1.66 to 1.70)
75. 1.08×10^{-7} (1.06×10^{-7} to 1.10×10^{-7})