

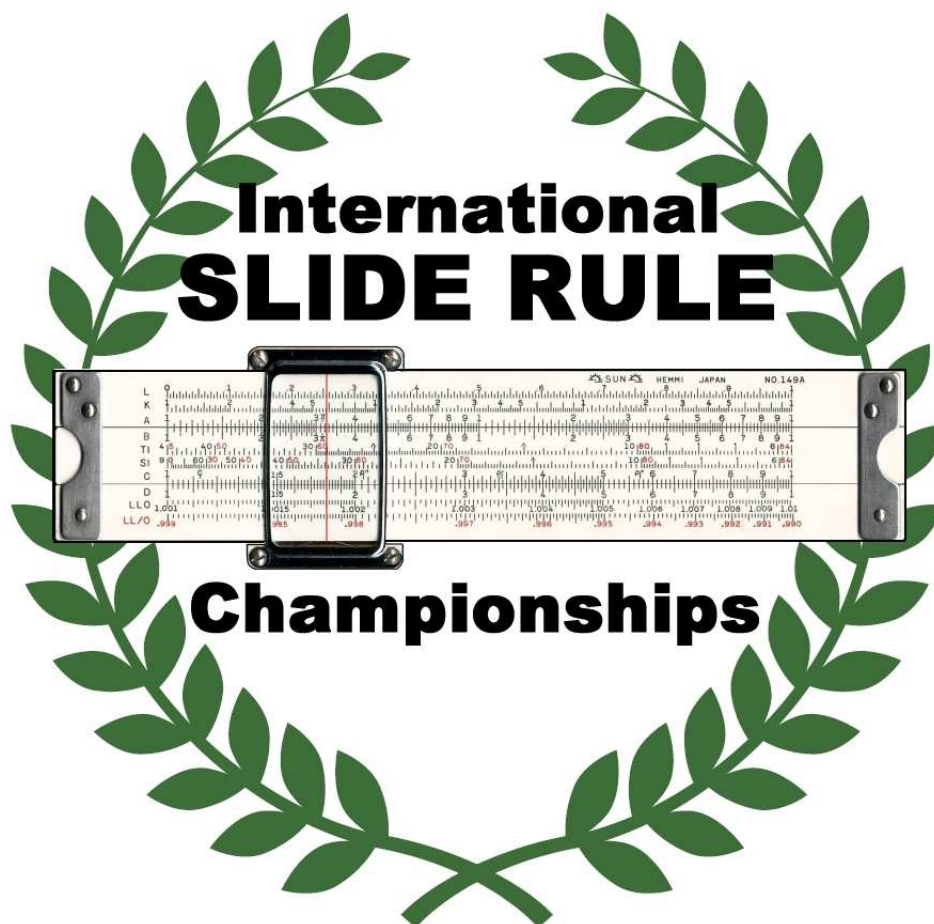
Contestant: _____

Host Group: _____

Location: _____

Contest Date: _____

Administrator: _____



ISRC Official PRACTICE Problem Set

The actual contest problems will consist of equations in the forms as shown with slightly altered constants. A 10 minute contest will consist of 10-15 problems.

All Practice, Problem, Contest Sets and variations of these equations with altered constants and decimal places are ©2009 by ISRM

Instructions: Using only a slide rule, and only these Contest sheets as scratch paper, obtain numerical values for the following expressions and enter them in the space provided. You have _ _ minutes to correctly complete as many expressions as possible. Solve using 3 significant figures. The decimal place must be properly placed to be correct.

Contestant: _____

P-1: $42.1 \times 7.65 =$

P-2: $\frac{68.2}{0.575} =$

P-3: $615^2 =$

P-4: $53.2^3 =$

P-5: $\sqrt{86} =$

P-6: $\sqrt[3]{12.3} =$

P-7: $\frac{1}{2\pi} =$

P-8: $\sin 31.8^\circ =$

P-9: $\cos 67^\circ =$

P-10: $\tan 2.80^\circ =$

P-11: $3.3^4 =$

P-12: $\frac{118 \times 0.51}{6.6} =$

P-13: $\frac{0.086}{6.22 \times 0.003} =$

P-14: $\frac{135}{15} \times \frac{1}{0.6} =$

P-15: $\frac{9/16}{5/8} =$

P-16: $12.3^2 \times 4.32^3 =$

P-17: $\frac{20.8^2}{2.5^3} =$

P-18: $\cos 16.5^\circ \times \frac{31.4}{\pi} =$

P-19: $\sqrt{14.5} \times 586 =$

P-20: $\sqrt[3]{680} \times 0.0065 =$

P-21: $\sqrt{33.8} \times \sqrt[3]{226} =$

P-22: $\frac{148000}{\sqrt{12.5} \times 16.7} =$

P-23: $\frac{\sqrt{153}}{\sqrt[3]{4.95}} =$

P-24: $1.35^3 \times 24.6^2 \times 0.22 =$

P-25: $\frac{2.25^2 \times 1030}{4820 \times 0.37} =$

P-26: $\frac{127500 \times \sin 58^\circ}{0.0084 \times 6380 \times \pi^2} =$

P-27: $\frac{43.6 \times 940 \times 0.34}{860 \times 1.55 \times 0.045} =$

P-28: $\frac{41^2 \times 0.00055 \times 1580}{84 \times 11.6 \times 1.8^3} =$

P-29: $\frac{\sqrt{515 \times 325}}{0.435 \times 146} =$

P-30: $\frac{\sqrt{22^3 \times 7}}{2330 \times 0.062 \times \pi^3} =$

P-31: $\frac{\sqrt{96 \times 250}}{\sqrt{7 \times 0.88}} =$

P-32: $\frac{\sqrt{\frac{56}{620}}}{\sqrt{\frac{70}{0.0082}}} =$

P-33: $\frac{1305 \times \sqrt{\frac{340}{16}}}{\sqrt{\frac{510}{5.2}} \times 0.058} =$

P-34: $\frac{46^2 \times \sqrt[3]{410}}{\sqrt{245\pi}} =$

P-35: $\frac{852^2}{\sqrt{505\pi} \times \sqrt[3]{386}} =$

P-36: $\frac{\sqrt{\frac{0.35}{1.72}} \times \pi^2 \times 6}{41.2^2 \times 0.54} =$

P-37: $1.92^{10} =$

P-38: $\sqrt[10]{6.2} =$

P-39: $7.8^{2.3} =$

P-40: $\frac{1}{3^7} =$



Acceptable Answer Sheet

P-1: 322 (320 to 324)
P-2: 119 (117 to 121)
P-3: 378,000 (376,000 to 380,000)
P-4: 151,000 (149,000 to 153,000)
P-5: 9.27 (9.24 to 9.30)
P-6: 2.31 (2.29 to 2.33)
P-7: 0.159 (0.157 to 0.161)
P-8: 0.527 (0.525 to 0.529)
P-9: 0.391 (0.389 to 0.393)
P-10: 0.0490 (0.0485 to 0.0495)
P-11: 119 (117 to 121)
P-12: 9.12 (9.06 to 9.16)
P-13: 4.61 (4.59 to 4.63)
P-14: 15.0 (14.8 to 15.2)
P-15: 0.90 (0.88 to 0.92)
P-16: 12,200 (12,000 to 12,400)
P-17: 27.7 (27.5 to 27.9)
P-18: 9.58 (9.56 to 9.60)
P-19: 2230 (2220 to 2250)
P-20: 0.0572 (0.0568 to 0.0576)
P-21: 35.4 (35.0 to 35.8)
P-22: 2510 (2490 to 2530)
P-23: 7.26 (7.22 to 7.30)
P-24: 328 (326 to 330)
P-25: 2.92 (2.90 to 2.94)
P-26: 204 (202 to 206)
P-27: 232 (230 to 234)
P-28: 0.257 (0.255 to 0.259)
P-29: 6.44 (6.42 to 6.46)
P-30: 0.048 (0.045 to 0.051)
P-31: 62.4 (62.2 to 62.6)
P-32: 0.00325 (0.00321 to 0.00329)
P-33: 10470 (10320 to 10620)
P-34: 567 (561 to 573)
P-35: 2500 (2440 to 2560)
P-36: 0.0291 (0.0287 to 0.0295)
P-37: 680 (670 to 690)
P-38: 1.20 (1.198 to 1.22)
P-39: 113 (110 to 116)
P-40: 0.000457 (0.000452 to 0.000461)



Hints on scales to use. Not listed in order of use. Other scales may be used as well.

- Problem 1: C, D
- Problem 2: C, D
- Problem 3: D, A or C, B
- Problem 4: D, K
- Problem 5: D, A or C, B
- Problem 6: D, K
- Problem 7: C, CI
- Problem 8: S, C
- Problem 9: S, C
- Problem 10: T, C
- Problem 11: D, K, C
- Problem 12: C, D
- Problem 13: C, D
- Problem 14: C, D
- Problem 15: C, D
- Problem 16: C, D, A, K
- Problem 17: C, D, A, K
- Problem 18: C, D, S
- Problem 19: C, D, A, B
- Problem 20: C, D, K
- Problem 21: C, D, A, B, K
- Problem 22: C, D, A, B
- Problem 23: C, D, A, B, K
- Problem 24: C, D, A, B, K
- Problem 25: C, D, A, B
- Problem 26: C, D, A, B, S
- Problem 27: C, D
- Problem 28: C, D, A, B, K
- Problem 29: C, D, A, B
- Problem 30: C, D, K
- Problem 31: C, D, A, B
- Problem 32: C, D, A, B
- Problem 33: C, D, A, B
- Problem 34: C, D, A, B, K
- Problem 35: C, D, A, B, K
- Problem 36: C, D, A, B
- Problem 37: LL1, LL2 or LL2, LL3
- Problem 38: LL3, LL2 or LL2, LL1
- Problem 39: LL3, C
- Problem 40: LL3, C, CI