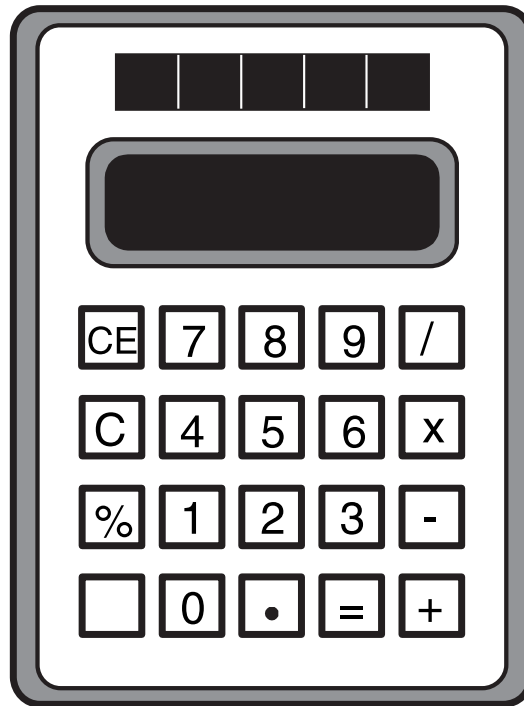


INVITATIONAL 2009-2010

A+ PROGRAM



University Interscholastic League



Calculator Applications

**DO NOT OPEN TEST
UNTIL TOLD TO DO SO**

10A-1. $2180 - 1490$ ----- 1= _____

10A-2. $206 - 176 + 153$ ----- 2= _____

10A-3. $1540 - 3850 - 5280$ ----- 3= _____

10A-4. $36 + 203 - 187 - 108$ ----- 4= _____

10A-5. $2240 - 1120 + 402 - 2140$ ----- 5= _____

10A-6. $443 + 227 - 139 - 59 - 198$ ----- 6= _____

10A-7. $472 + 172 - 316 + 338 + 145$ ----- 7= _____

10A-8. $(219 - 104) + (612 - 168 - 442)$ ----- 8= _____

10A-9. $151 \times 93.1 \times 107$ ----- 9= _____

10A-10. $1000 \times 66.2 \times 2200 \times 42$ ----- 10= _____

10A-11. If Dan earns \$21.75 per hour of work, how much does he earn for working 40 hours?----- 11=\$ _____

10A-12. I use an average of 7 inches of dental floss every time I floss my teeth. If I floss twice per day and my floss container has 55 yards of dental floss, what is the maximum number of days I can floss with this container of floss?----- 12= _____ integer

10A-13. A store's sale flyer advertised "take an extra 15% off" any sale or regular-priced purchase with a special coupon on a particular Saturday. If Genny had this coupon and purchased a purse regularly priced at \$49.99 with a 33% mark off tag, how much did she pay for the purse before sales tax was added?----- 13=\$ _____

10A-14. $(385) [262 \times 380/153]$ ----- 14= _____

10A-15. $(145) [87 \times 110 \times 43]$ ----- 15= _____

10A-16. $\{201/44\} \left[\frac{25}{142 + 131} \right]$ ----- 16= _____

10A-17. $\left[\frac{293}{426} \right] [(212/76) - 2.17]$ ----- 17= _____

10A-18. $\frac{(755/387) + (237/100)}{(0.0173 - 0.0353)}$ ----- 18= _____

10A-19. $\left[\frac{95/41}{80/90} \right] \{1.7 + 2.12 - 0.704\}$ ----- 19= _____

10A-20. $\left[\frac{(\pi)(2400)}{(8.80 \times 10^{-5})} \right] (0.0033 - 0.00191)$ ----- 20= _____

10A-21. $\frac{266}{(344 - 569)} - \frac{(137 - 466)}{94}$ ----- 21= _____

10A-22. $\frac{(\pi)(900/322)(850/833)}{(253/419)}$ ----- 22= _____

10A-23. $\frac{(539 \times 1050)/1300}{(1350 \times 1.03 \times 10^{-4}) + 0.127}$ ----- 23= _____

10A-24. If a nickel "weighs" 5 grams and one ounce avoirdupois is equivalent to 28.3495 grams, how much does \$100 worth of nickels weigh? ----- 24= _____ lbs.

10A-25. If a football field has a length of 100 yards and a width of 160 feet, what is the shortest distance from the middle of the football field to one of the corners of the field? ----- 25= _____ ft

10A-26. What is the percent error in using 3 for pi? -- 26= _____ %

10A-27. $(63.9) [(0.25/0.363) (1.14/1.94)]$ ----- 27= _____

10A-28. $\frac{(2.12 \times 10^{13}) + (2.91 \times 10^{13})}{(-0.0172)(0.0493) - (5.42 \times 10^{-4})}$ ----- 28= _____

10A-29. $[419 - (151 + 802)] + [2.52(568 - 771)]$ --- 29= _____

10A-30. $\frac{1}{44.7} + \frac{1}{(\pi)(79.1 - 60.6)}$ ----- 30= _____

10A-31. $(23.5) [(1.50 \times 10^{-11}) - (1.87 \times 10^{-11})]$ ----- 31= _____

10A-32. $(161) \left[\frac{3.74 \times 10^{-4}}{(1.02 \times 10^7)} \right]$ ----- 32= _____

10A-33. $\left[\frac{1/1390}{1/1940} \right] [2.42 \times 10^6]$ ----- 33= _____

10A-34. $\frac{1}{1940} - \frac{1}{695} + \frac{1}{1830}$ ----- 34= _____

10A-35. While driving down a highway, I determined it took me 11.31 seconds to pass 6 utility poles that were equally spaced apart and parallel to the road I was driving on. If my speed was 61 mph, what is the distance between two poles? ----- 35= _____ ft

10A-36. Li purchased a dozen roses for \$19.99. The florist told him he would be given a 10% cheaper price if he bought more than 3 dozen roses. How much did 4 1/2 dozen roses cost Li? ----- 36=\$ _____

10A-37.

SQUARE

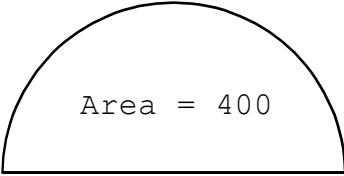
Area
= 0.16

Perimeter = ?

10A-37 = _____

10A-38.

SEMICIRCLE



Area = 400

Periphery = ?

10A-38 = _____

10A-39. $\left[\frac{3.7}{205}\right](1.58 + 1.82)^2$ ----- 39= _____

10A-40. $\frac{(10600 + 36300)^3}{(0.0296 - 0.0345)^2}$ ----- 40= _____

10A-41. $(0.759 + 0.431)^2(5.25 + 7.82)^2$ ----- 41= _____

10A-42. $\sqrt{493 - 419 + 424} - \sqrt{210}$ ----- 42= _____

10A-43. $\sqrt{(5200/3000) + 1.36 - 0.61}$ ----- 43= _____

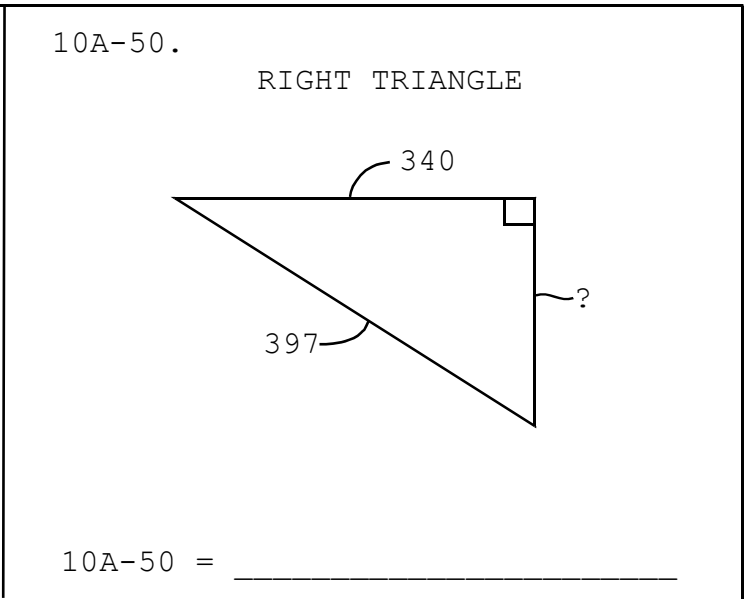
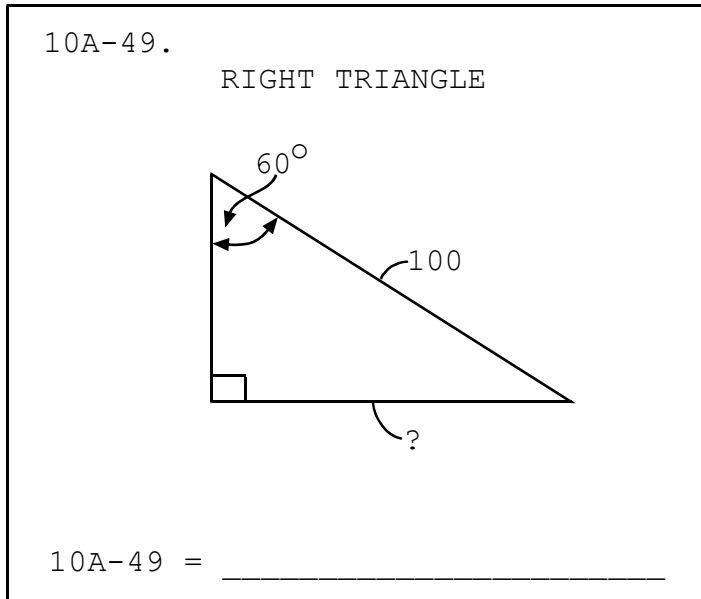
10A-44. $(1/\pi)\sqrt[3]{\frac{0.0766 + 0.0459}{0.0883 - 0.0649}}$ ----- 44= _____

10A-45. $\sqrt{0.825 - 942/2010} + 1/\sqrt{1.12 + 0.814}$ ----- 45= _____

10A-46. $[\sqrt{(1470/3440)(36.6)}]^4$ ----- 46= _____

10A-47. Madeline measured the circumference of a grapefruit to be 12.25 inches. Liz measured the circumference to be 12.50 inches. What is the percent difference in their measurements?----- 47= _____ %

10A-48. What is the volume of a wire that is 1/32 inches in diameter and 10 meters long?----- 48= _____ in³



10A-51. $\left[\frac{7020 + 9370 + \sqrt{7.20 \times 10^7 + 2.33 \times 10^8}}{907/602} \right]^3$ ----- 51= _____

10A-52. $\left[\frac{\sqrt{\sqrt{0.0394} - 0.00981}}{-(0.00782 - 0.0163)} \right]^2$ [148 + 86.7] ----- 52= _____

10A-53. $\frac{(55800 + 55100 - 61400)^2}{\sqrt{0.0164 + 0.00691 + 0.0159}}$ ----- 53= _____

10A-54. $12200 + \sqrt{(12400)(9320)} - (5150 + 11900)$ ---- 54= _____

10A-55. $(2.12)(4.43 \times 10^7)^{1/2} - [(1.10 \times 10^8)(2.59 \times 10^8)]^{1/4}$ 55= _____

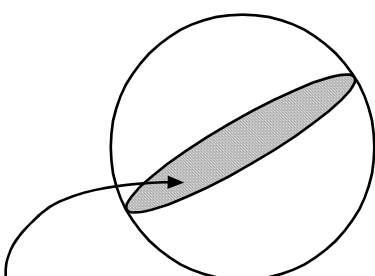
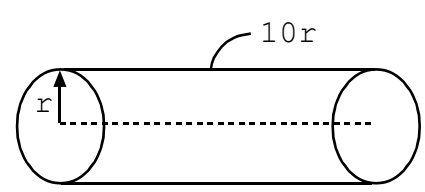
10A-56. $(1.06)^2 \sqrt{(1.3)/(1.47)} - (0.644 + 0.782)$ ---- 56= _____

10A-57. $(\text{deg}) \tan(662^\circ) + (3640/3430)$ ----- 57= _____

10A-58. $\sqrt{\frac{(45.6)(28)}{(450) + (2550)}} + 1/(0.918)^{-5}$ ----- 58= _____

10A-59. If my hose fills a 5 gallon bucket in 2 minutes, 12 seconds, how many gallons of water will flow from my hose in 10 minutes?----- 59= _____ gal

10A-60. Guillermo's mousetrap car had back wheels of a diameter 6 inches and front tires of diameter 2 inches. What is the positive difference in the number of revolutions the wheels make in rolling 20 feet?----- 60= _____ rev

<p>10A-61.</p> <p style="text-align: center;">SPHERE</p>  <p>Great Circle Area = 100</p> <p>Sphere Surface Area = ?</p> <p>10A-61 = _____</p>	<p>10A-62.</p> <p style="text-align: center;">RIGHT CYLINDER</p>  <p>Volume = 100</p> <p>Total Surface Area = ?</p> <p>10A-62 = _____</p>
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10A-63. $\frac{20! + 25!}{27!}$ ----- 63= _____

10A-64. (deg) $\frac{\tan(0.633^\circ)}{380}$ ----- 64= _____

10A-65. $(6.19 - \pi)e^{0.142}$ ----- 65= _____

10A-66. (deg) $(67.7 - 63.8)\tan(1.66^\circ) + 0.0546$ ----- 66= _____

10A-67. (rad) $\cos\left[\frac{2.39(\pi)}{(26.5)(17.3)}\right]$ ----- 67= _____

10A-68. (rad) $\tan[(4.21 - 4.09)(29.8)]$ ----- 68= _____

10A-69. (deg) $\frac{\sin(64.2^\circ) - \tan(64.2^\circ)}{\sin(64.2^\circ)}$ ----- 69= _____

10A-70. $(68.6 - 31.4)e^\pi - 0.369$ ----- 70= _____

10A-71. The distance traveled during constant acceleration is the product of the average speed and the time of the acceleration. How far does Gilbert travel while slowing down from 45 mph to 20 mph in 6 seconds?----- 71= _____ ft

10A-72. Calculate 450^{450} .----- 72= _____

10A-73. RIGHT TRIANGLE

Area = 100

1.88 L

10A-73 = _____

10A-74. INSCRIBED RIGHT TRIANGLE

29.5

?deg

Circumference = 100

10A-74 = _____

10A-75. $\frac{0.00546 + \sqrt{(0.027)(0.0276)} + (0.0395)(0.0781)}{\sqrt{\sqrt{1.91 + 1.21}}}$ 75= _____

10A-76. $\frac{\text{Log}(40500 + 11500)}{198 - 75.8}$ ----- 76= _____

10A-77. $2\text{Log}\sqrt{\frac{(10.6)(445)}{4.77 + 3.63}}$ ----- 77= _____

10A-78. $\text{Log}\sqrt{\frac{7.24 - 3.42}{(8.88)(1.06)}}$ ----- 78= _____

10A-79. $\text{Ln}\left[\frac{15.3 + 47 + 47.9}{182 - 49.9 - 67.7}\right]$ ----- 79= _____

10A-80. $1 + 3 + 5 + \dots + 633$ ----- 80= _____