

24B-1. $(-96.6/54) + \pi$ ----- 1= _____

24B-2. $(-34.8 + 30.6 - 16.5) \times 69$ ----- 2= _____

24B-3. $(0.969 - 0.421 + 2.16) \times (0.937) - 3.3$ ----- 3= _____

24B-4. $\frac{9780 + 23600 - 18700}{(0.0885)(-0.0587)(-0.0579)}$ ----- 4= _____

24B-5. $\frac{(1.77 + 1.33 - 2.46)(-3.7)}{(2.9)(-6.8)(-1.14)}$ ----- 5= _____

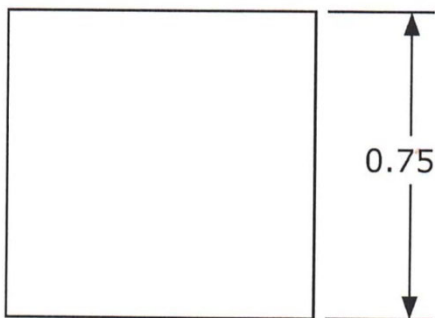
24B-6. What is the product of 237 and 0.362? ----- 6= _____

24B-7. What is the sum of 1.63 and the product of 2.1 and 0.796? ----- 7= _____

24B-8. A lizard grows from 4.32 in to 9.75 in over 2 months. What is the positive change in length? ----- 8= _____ in

24B-9.

SQUARE

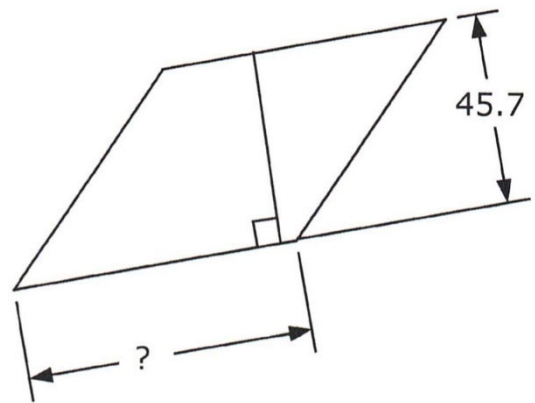


Perimeter = ?

24B-9 = _____

24B-10.

RHOMBUS



Area = 3170

24B-10 = _____

24B-11. $\frac{(5420 + 1730)}{(0.981 - 1.59)} + \frac{(-20800 + 54200)}{(2.74 - 0.677)}$ ----- 11= _____

24B-12. $\frac{-0.0971(5.45 \times 10^{-5} + 2.54 \times 10^{-5})}{(528 - 3340)(-0.0154)} - \frac{-3.20 \times 10^{-7}}{-0.699 - 0.609}$ ----- 12= _____

24B-13. $\frac{(-2.65 \times 10^{-5} - 3.88 \times 10^{-5})\{22.2 + (-2.48)(-8.48)\}}{(4.27)(-0.395 + 0.132)(-1.64)(8.76)}$ ----- 13= _____

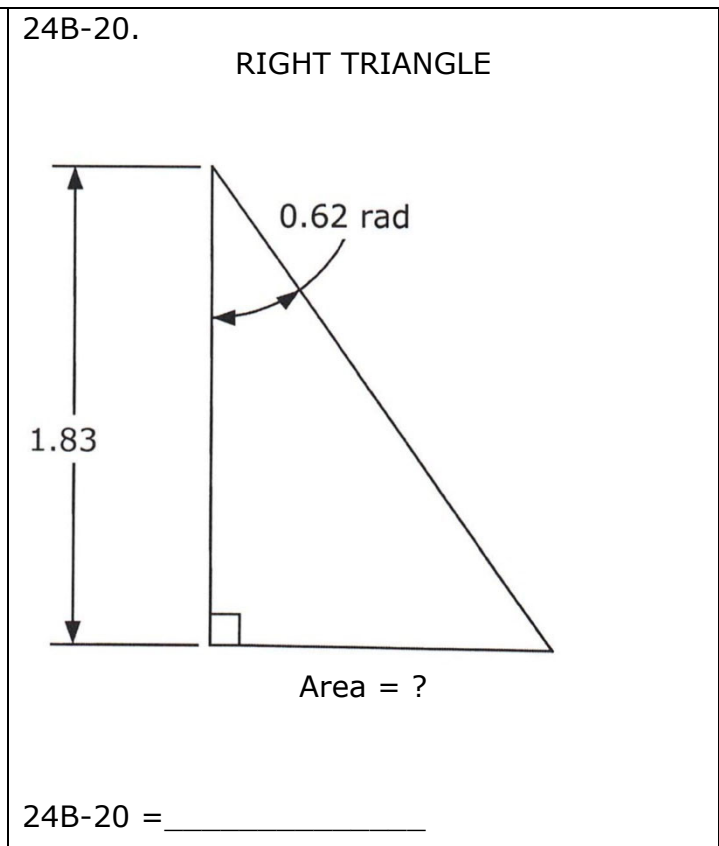
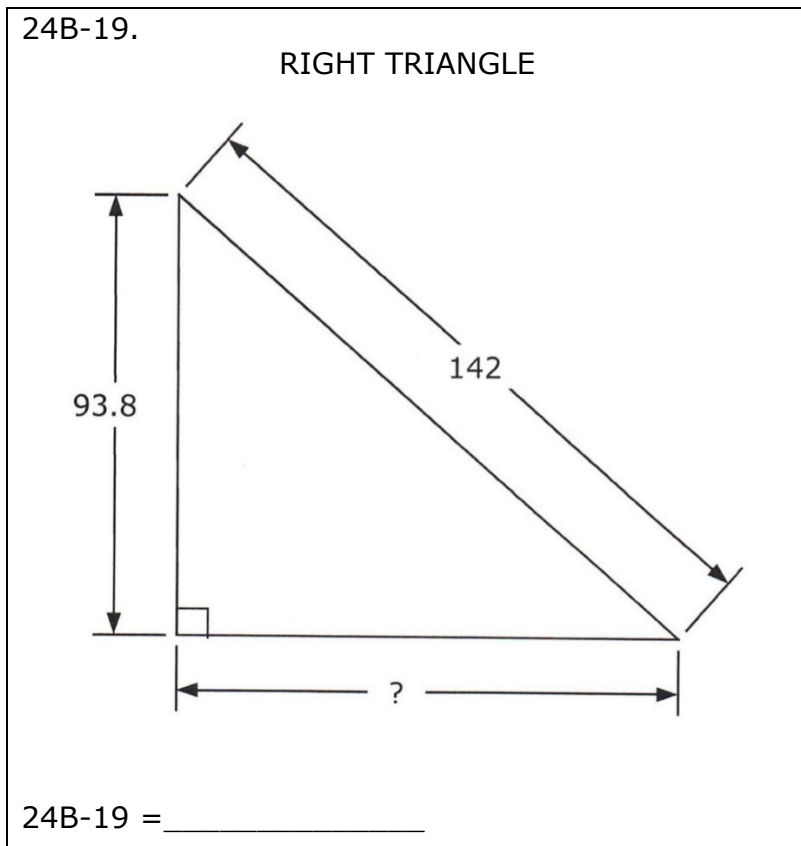
24B-14. $\frac{238 + 207 - 592}{(0.199)(2.92)} - \frac{(-30500)(9.76 \times 10^{-4} + 3.56 \times 10^{-4})}{0.987 + 0.745 - 0.823}$ ----- 14= _____

24B-15. $\frac{4.60 \times 10^5 + 5.54 \times 10^5 - (77900 + 2.01 \times 10^5)(2.83 - 0.991)}{(-897)(-0.0638)(-0.492)(185 - 32.5 + 209)}$ ----- 15= _____

24B-16. Monica wants to read *A Tale of Two Cities*. If she reads 178 words per minute, and the book is 146,500 words. How long will it take her to finish the book? ----- 16= _____ hr

24B-17. What is the y value of the intersection of the lines $y = x/4 - 8$ and $y = -3x + 6$? ----- 17= _____

24B-18. Grant Woods sold his painting, *American Gothic*, to the Art Institute of Chicago in 1930. It is worth 75 million dollars in 2024. If the annual appreciation rate was 14.1%, what was the original sales price? ----- 18= \$ _____



24B-21. $\frac{-0.0804 + 1/(\pi)}{1/(0.591) + 2.63} + \frac{1}{(-17)}$ ----- 21= _____

24B-22. $\left[\frac{\sqrt{2.22 - 1.01}}{-3.15} + \frac{(-0.612)}{7.43} \right]^2$ ----- 22= _____

24B-23. $[-21.4 + \sqrt{383}]^2 \times [984 + 1040]^2 \times \sqrt{\pi/2.11}$ ----- 23= _____

24B-24. $\frac{\sqrt{7.76 + 4.89 + (25.4)/(5.64)}}{-5.97 + 4.43}$ ----- 24= _____

24B-25. $(-478)(-0.202) + \sqrt{(15700)/(6.82)} + [(0.955)(7.66)]^2$ ----- 25= _____

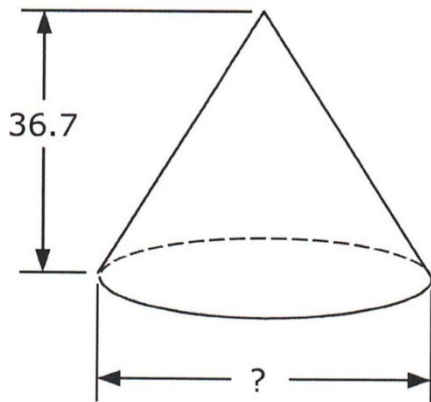
24B-26. Monica has three printer ink cartridges. One is 0.5 full, one is 0.4 full, and the third is 0.8 full. If an unused ink cartridge can print 335 pages, how many pages can Monica print if she uses up all three cartridges? ----- 26= _____ pages(SD)

24B-27. Emily lives 2.8 mi from school. Driving the speed limit, she gets to school in 4.8 min. If she's running late and drives 10 mph over the speed limit, how much time does she save driving to school? ----- 27= _____ s

24B-28. A school group bought 6 dozen Krispy Kreme donuts at \$13/doz. They sold them at school for a fundraiser. They raised \$50, even though they ate one donut in nine without paying for it. What was the percent increase in donut cost? ----- 28= _____ %

24B-29.

CONE

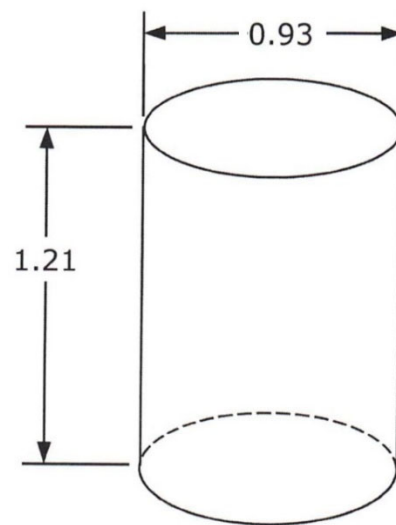


Volume = 20,900

24B-29 = _____

24B-30.

CYLINDER



Lateral Surface Area = ?

24B-30 = _____

24B-31. $\left[\frac{-31.5}{65.5 + 25} + 0.466 \right] \times \left\{ 33.8 + (-13.8)^2 - \sqrt{63800} \right\}$ ----- 31= _____

24B-32. $\frac{1}{0.00375} + \frac{1}{\sqrt{9.75 \times 10^{-6}}} + \frac{(3.8 + 10.3 - 1.43)^2}{\sqrt{1.49 - 0.956}}$ ----- 32= _____

24B-33. $\frac{(8.65)^2 + \sqrt{4200}}{\sqrt{(0.935)(-27.5)^2}} + \frac{\sqrt{\sqrt{(1.04 \times 10^5)(0.215)}}}{0.554 + 2.86}$ ----- 33= _____

24B-34. $\frac{[(4.56 - 1.12)(0.96/0.591)]^{1/2}}{(0.232)^2 + (0.14 + 0.207)^2 + 0.111}$ ----- 34= _____

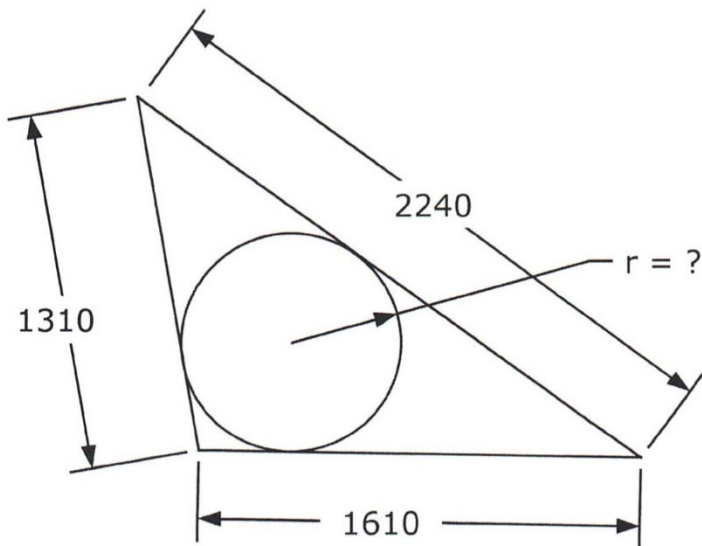
24B-35. $\frac{\left[\frac{\sqrt{0.00564 + 0.0136}}{(6820)(14100) + (9820)^2} \right]}{\sqrt{0.00223 + 0.00238} + (0.215 - 0.0378)^2}$ ----- 35= _____

24B-36. A drone flies at 400 ft elevation and 95 mph. When it is directly overhead, Joe, on the ground, fires a rocket at an angle to intercept the drone. The rocket travels in a straight line at 230 mph. How far did the rocket travel to intercept the drone? ----- 36= _____ ft

24B-37. What is the length of the line segment defined by the intersections of the line $y = 2x + 7$ with the curve $y = 5/x + 2$? ----- 37= _____

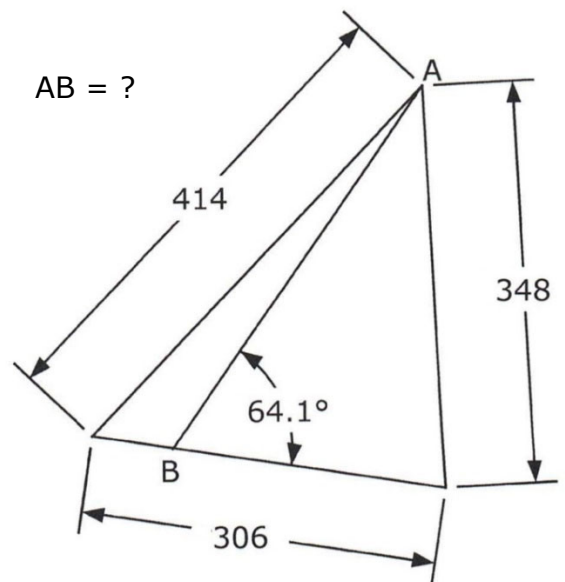
24B-38. How many minutes after 6:45 do the minute and hour hands of a clock line up? ----- 38= _____ min

24B-39. SCALENE TRIANGLE AND INSCRIBED CIRCLE



24B-39 = _____

24B-40. SCALENE TRIANGLES



24B-40 = _____

24B-41. $10^{-\{(0.309 - 0.645)/(0.14 + 0.0963)\}}$ ----- 41= _____

24B-42. $-1190 e^{0.424} + (-868) e^{-0.332}$ ----- 42= _____

24B-43. $\frac{\ln(0.219 + 0.755 - 0.149)}{(-0.252)}$ ----- 43= _____

24B-44. $(-7.09 \times 10^5 + 2.18 \times 10^6)^{-(0.299 + 0.856)}$ ----- 44= _____

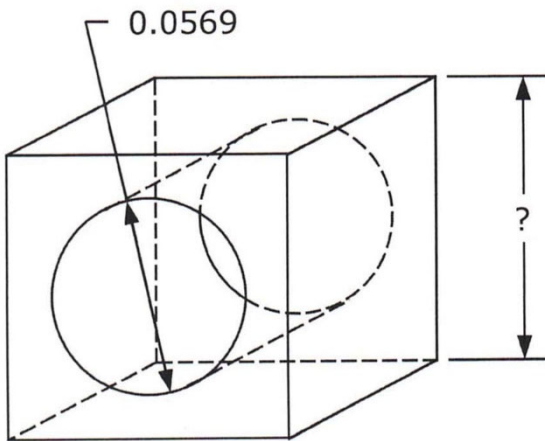
24B-45.(deg) $\{(-2810)\sin(-54.7^\circ)\} \times \{(-5150)\cos(-130^\circ)\}$ ----- 45= _____

24B-46. Pizzas have the same thickness regardless of size. If a large 14-in pizza feeds 3 people, what sized pizza is needed to feed 100 people? ----- 46= _____ in

24B-47. It is 2002 mi traveling from Texas to Massachusetts. Olivia's daily driving distance the first 3 days of her trip were 310 mi, 250 mi and 300 mi. Estimate the total number of days for the trip. ----- 47= _____ dy integer

24B-48. Solve for n if $n^n = 235$. ----- 48= _____

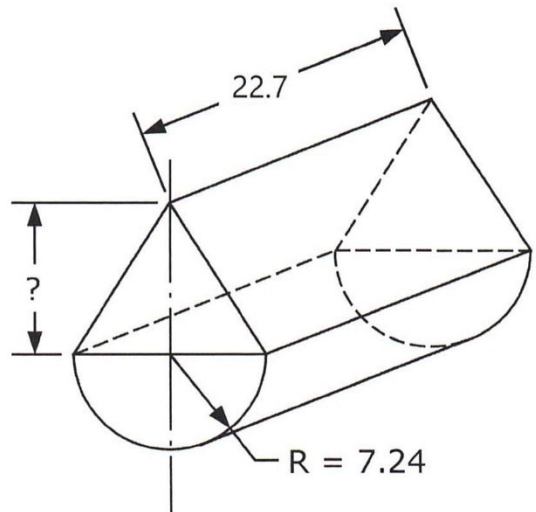
24B-49. CUBE WITH CYLINDRICAL CAVITY



Total Surface Area = 0.0497

24B-49 = _____

24B-50. HALF CYLINDRICAL PRISM AND ISOSCELES TRIANGLE PRISM



Volume (Triangular Prism) = Volume (Half Cylindrical Prism)

24B-50 = _____

24B-51. $\frac{10^{(0.928)} \times 10^{-(0.751)} + 0.998}{10^{(1.58 + 0.855)}} \dots\dots\dots 51 = \underline{\hspace{2cm}}$

24B-52. $\frac{1 + e^{\{0.533 + (0.746)(3.2)\}}}{(-0.00645)(8.36 - e^{(-0.722)})} \dots\dots\dots 52 = \underline{\hspace{2cm}}$

24B-53. $\frac{\text{Log}\{291 + (50.2)(33.2)\}}{\pi - \text{Log}\{(93.9)/(0.0286)\}} \dots\dots\dots 53 = \underline{\hspace{2cm}}$

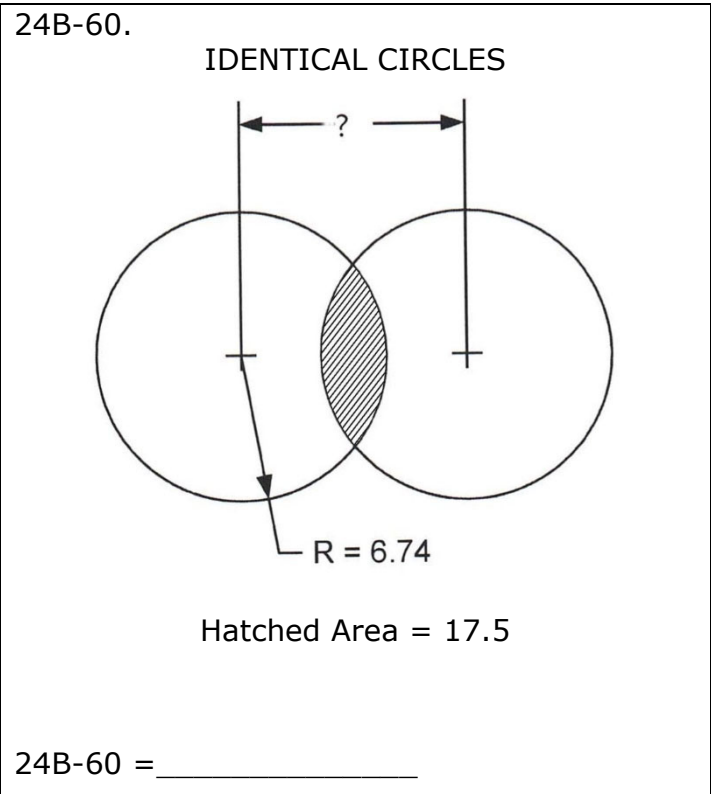
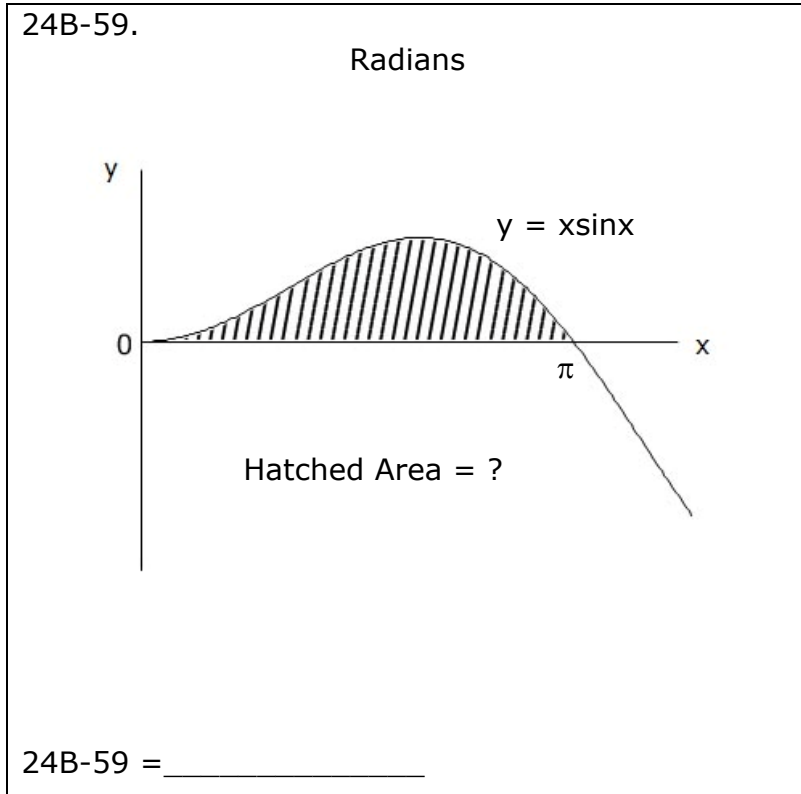
24B-54. $\frac{(0.659 + 0.862)^{-0.628}}{(0.527)^{-(0.149 + 0.11)}} \dots\dots\dots 54 = \underline{\hspace{2cm}}$

24B-55.(rad) $\frac{\arctan\{12.5 + (6.62)(0.807)\}}{\arcsin\{(4.51 + 2.24)/20.3\}} \dots\dots\dots 55 = \underline{\hspace{2cm}}$

24B-56. (rad) What is the slope of the curve $f(x) = 3x\sin(7x) + 2.5x+5$ at $x = 8$? $\dots\dots\dots 56 = \underline{\hspace{2cm}}$

24B-57. A 100-lb log decays proportional to the remaining mass of undecayed wood. If 10 lb of the log decays in 150 dy, how much longer would it take for a total of 90 lb of the log to be decayed? $\dots\dots\dots 57 = \underline{\hspace{2cm}}$ yr

24B-58. Solve for positive g if the determinant of $\begin{bmatrix} 20 & 5g & -14 \\ 5g & 7 & 7 \\ -14 & 7 & 31 \end{bmatrix}$ equals 35. -- 58 = $\underline{\hspace{2cm}}$



24B-61. The longest recorded hole-in-one was made by Mike Crean at Green Valley Ranch Golf Club in Denver in 2002, a distance of 517 yards. A golf cup is 4.25 in in diameter. What is the maximum angular dimension or wedge the ball must travel in? ----- 61= _____ deg

24B-62. A zeptosecond is 10^{-21} sec. What is this number raised to the power 65,321? ----- 62= _____

24B-63. Zelda stands 15 ft away from a 25-ft wall. She tosses a ball to Xavier who stands atop the wall. What should the release angle be (relative to the ground) if the ball has no vertical component of velocity when it is caught. ----- 63= _____ deg

24B-64.

SQUARE
M = midpoints

Hatched Area = 538

24B-64 = _____

24B-65.

CIRCLE AND EQUILATERAL TRIANGLE

Hatched Area = ?

24B-65 = _____

24B-66. $2\text{Log} \sqrt{\frac{(7.99)(9.83)(5.41)}{(2.34)^3(4.45)^3}}$ ----- 66= _____

24B-67. (rad) $\frac{\sin(0.576)}{\cos(0.576)} \sqrt{1 - \{\sin(0.977 \times 9.15)\}^2}$ ----- 67= _____

24B-68. (deg) $\sin(-41.5^\circ)\cos(172^\circ) + \cos(-41.5^\circ)\sin(172^\circ)$ ----- 68= _____

24B-69. $-\frac{1}{(3.9)} + \frac{1}{3(3.9)^3} - \frac{1}{5(3.9)^5} + \frac{1}{7(3.9)^7}$ ----- 69= _____

24B-70. (rad) $e^{(7.08)} \left[\frac{(-0.108)\sin(5.21) - (-0.0255)\cos(-2.66)}{(0.834)\sqrt{(-0.108)^2 + (-0.0255)^2}} \right]$ ----- 70= _____