

FEATURES NEW-STYLE UIL CALCULATOR FORMAT

1.  $(4.45 - 0.777)/(5.51)$  ----- 1= \_\_\_\_\_

2.  $(-1.39 - 0.612)/(9.35) + 0.0595$  ----- 2= \_\_\_\_\_

3.  $(25.4 - 17.8 + 21.6 + 3.82)/(19.2)$  ----- 3= \_\_\_\_\_

4.  $\{(-783)(0.343 + 0.371 - 0.34)(-341)\} + 42100$  ----- 4= \_\_\_\_\_

5.  $\frac{(-0.0013 - 0.00105)(-0.436)}{\{(-0.0621)/(0.758)\}} - (-0.0149 - 0.00953)$  ----- 5= \_\_\_\_\_

6. What number is three less than eighty percent of nine hundred ?

6= \_\_\_\_\_

7. Susie made 74 and 58 on her first two quizzes. What must she average on the next two quizzes to raise her overall average on the four quizzes to at least 80 ?

7= \_\_\_\_\_

8. Subtract from 12 an unknown positive number, multiply by their average and you get 50. What is the number ?

8= \_\_\_\_\_

TWO GEOMETRIC DRAWINGS HERE

**RAM 329**

11.  $\frac{(29 + 7.8)(41.6 + 52.4)}{(-1.26)(0.604)(6740 - 26600)}$  ----- 11= \_\_\_\_\_

12.  $\frac{0.0622 + 0.0377}{(0.714)(2.71)(1.27 \times 10^{-7})} + (766 + 4180)(566 - 537)$  ----- 12= \_\_\_\_\_

13.  $\frac{(-55.7)(856 - 745)\{1680 - (-79.7)(-19)\}}{(62.4 + 21.8)(38.4 - 45.3)}$  ----- 13= \_\_\_\_\_

14.  $\frac{(2330 + 1930 - 1130)(0.0099 + 0.0115 - 0.00989)}{(0.017 - 0.0127)(0.45)(-0.102 - 0.0505)}$  ----- 14= \_\_\_\_\_

15.  $\frac{(26300 + 4680 - 4740)(0.102 - 0.0257 - 0.0353)}{(-76)(-25.1)(-22.1)(1.4 + 0.412 + 3.97)}$  ----- 15= \_\_\_\_\_

16. Donuts cost \$3.21 a dozen but 33¢ when bought individually. What is the saving per donut when bought by the dozen ?

16= \_\_\_\_\_ ¢

17. A 25-foot roll of screen wire costs \$15.60 at the hardware store. If the cost is 22 cents/sq. ft., what is the width in inches ?

17= \_\_\_\_\_ inches

18. An area of 31 sq. in. is approximately 200 sq. cm. What is the percent error in this approximation ?

18= \_\_\_\_\_ %

**TWO GEOMETRIC DRAWING HERE**

**RAM 329**

21.  $\left[ \frac{\sqrt{1.5 - 0.648}}{7.07} + \frac{(0.454)}{4.45} \right]^2$  ----- 21= \_\_\_\_\_

22.  $\frac{1}{-6.83 + 8.33} + \frac{1}{0.588 - 1.22} + \frac{1}{(0.756)}$  ----- 22= \_\_\_\_\_

23.  $\frac{\sqrt{0.0536 + 0.0526 + (6.83 \times 10^{-4}) / (0.0346)}}{0.0177 + 0.004}$  ----- 23= \_\_\_\_\_

24.  $(166)(0.0331) + \sqrt{(12.3)/(2.78)} + [(0.173)(9.11)]^2$  ----- 24= \_\_\_\_\_

25.  $(-89.2)(-0.00656)\sqrt{(-0.488)^2/0.174} + 1/\sqrt{0.589 + 0.703}$  ----- 25= \_\_\_\_\_

26. A pump sends up 2454 cu. ft. of water in 4 hours and 12 minutes. How long will it take (decimal hours) to pump up 74000 cu. ft. of water ?

26= \_\_\_\_\_ hours (SD)

27. Find the positive root of  $2x^4 + x^2 + 5x - 17 = 0$ .

27= \_\_\_\_\_

28.  $(423^{38})^{21}$  is equal to what ?

28= \_\_\_\_\_

TWO GEOMETRIC DRAWINGS HERE

**RAM 329**

$$31. \frac{(-2.10 \times 10^{-6} + 6.65 \times 10^{-6})^2}{\sqrt{66.6 - 65.3}} + \frac{5.76 \times 10^{-14}}{\sqrt{7.55 \times 10^{-5} + 2.64 \times 10^{-4}}} \text{ ----- } 31 = \underline{\hspace{2cm}}$$

$$32. \sqrt{\frac{1/(806 - 514)}{(631)(1.87 + 1.45)^2}} + (-2150)^2(2.06 \times 10^{-10}) \text{ ----- } 32 = \underline{\hspace{2cm}}$$

$$33. \frac{(1.19 \times 10^5)^2(3.19 \times 10^{-11} + 1.75 \times 10^{-11})}{163 + (-0.373)(-1570)} + \frac{1}{3.39 \times 10^{-4} + \frac{1}{(-2.04 \times 10^{-4})}} \text{ ----- } 33 = \underline{\hspace{2cm}}$$

$$34. \frac{[(3.54 - 2.43)(0.881/0.359)]^{1/2}}{(0.535)^2 + (0.105 + 0.46)^2 + 0.238} \text{ ----- } 34 = \underline{\hspace{2cm}}$$

$$35. \frac{(158 + 390)^2 - (1410 - 43.7)^2}{\sqrt{(351)(0.612)(335 + 316 - 1500)^2}} \text{ ----- } 35 = \underline{\hspace{2cm}}$$

36. When I sweep up a pile of dust in a dustpan with a broom, I seem to get about 80% of the pile. How many tries would it take to get at least 99% of the dust ?  
36= \_\_\_\_\_ (Integer)

37. A bird with a wingspan of 10 in. weigh 7 oz. Estimate the weight of a fly with a 1.2 cm. wingspan.  
37= \_\_\_\_\_ mg

38. Army gives Rich a dime one day, 10 dimes the next day, 100 dimes the next day, and so forth. How many days must Army give Rich money for Rich to become a millionaire ?  
38= \_\_\_\_\_ (Integer)

TWO GEOMETRIC DRAWINGS HERE

**RAM 329**

41.  $10^{-\{(0.26 - 0.43)/(0.38 + 0.284)\}}$  ----- 41= \_\_\_\_\_

42.  $-535 e^{0.553} + (-439) e^{-0.841}$  ----- 42= \_\_\_\_\_

43.  $(0.00865 - 0.0194) \text{Ln}\{(-0.0063)(-0.00348)\}$  ----- 43= \_\_\_\_\_

44.  $(929 + 1200)^{1/3} + 1/\{(790)^{-0.0849}\}$  ----- 44= \_\_\_\_\_

45. (deg)  $\sin \left[ 90^\circ \times \frac{(-3.89 \times 10^5)}{(2.73 \times 10^6)} \right] + \cos \{112^\circ - 69^\circ\}$  ----- 45= \_\_\_\_\_

46. A machinist drills a 1/4 inch diameter hole in a flat piece of steel. The bolt didn't go through the hole, so he redrilled with the next larger bit, which was 17/64 inches in diameter. What was the percent increase in the volume of the hole ?

46= \_\_\_\_\_ %

47. What is  $525^{455}$  ?

47= \_\_\_\_\_

48. Ginny proofs manuscripts at 24 pages per hour, and Jane proofs at 16 pages per hour. Ginny is give a 219 page manuscript to proof, and Hane receives a 76 page manuscript to proof with instructions to help Ginny when she is done. After Jane finishes the first manuscript, how many pages should Ginny give her if they want to finish at the same time ?

48= \_\_\_\_\_ pages (Integer)

TWO GEOMETRIC DRAWINGS HERE

**RAM 329**

51.  $\frac{(-33.2)10^{-(\pi-1.66)}}{84.9 + 23.7}$  ----- 51= \_\_\_\_\_

52.  $\frac{1 + e^{+{0.61+(1)(2.94)}}}{(-4.10 \times 10^{-5})(\pi - e^{(-0.228)})}$  ----- 52= \_\_\_\_\_

53.  $\frac{\ln(4.05 \times 10^{-4} + 0.00101)}{2.58 \times 10^{-5}} + \frac{\ln(8.51 \times 10^{-4})}{2.34 \times 10^{-4} - 1.99 \times 10^{-4}}$  ----- 53= \_\_\_\_\_

54.  $\frac{1}{(0.463)^{(-0.231)}} + (0.125 + 0.786)^{(0.825 - 0.133)}$  ----- 54= \_\_\_\_\_

55. (rad)  $\arctan \left[ \frac{(9830)(0.333)}{(7.75)(61.1)} \right] + (0.1)(2.71)$  ----- 55= \_\_\_\_\_

56. There are 50 billion active white cells in the blood supply. If the volume of the blood is five liters, how far apart are the white cells, on the average ?

56= \_\_\_\_\_ mm

57. At what distance does a cylindrical oil tank sitting on its circular base of 60 ft. diameter subtend a horizontal angle of 28° ? Count distance from the nearest point on the tank.

57= \_\_\_\_\_ ft

58. Looking across a flat desert, one can see a mountain in the distance with an elevation of 8.72 degrees. A 500 ft. tall tower on top of the mountain has an elevation of 8.96 degrees relative to the horizon. Find the distance (miles) to the mountain.

58= \_\_\_\_\_ miles

TWO GEOMETRIC DRAWINGS HERE

RAM 329

61.  $\text{Log}(4.87) + \text{Log}(2.55) + \text{Log}(2.57) + \text{Log} \left[ \frac{(8.97)}{(2.55)} \right]$  ----- 61=\_\_\_\_\_

62. (rad)  $\frac{\sin(0.969)}{\cos(0.969)} \sqrt{1 - \{\sin(0.425 \times 1.6)\}^2}$  ----- 62=\_\_\_\_\_

63. (rad)  $(8.67) \left[ \frac{\cos(-4.07)}{(-4.07)} + \frac{\cos(3.57)}{(3.57)} \right]$  ----- 63=\_\_\_\_\_

64.  $-\frac{1}{(8.69)} + \frac{1}{3(8.69)^3} - \frac{1}{5(8.69)^5} + \frac{1}{7(8.69)^7}$  ----- 64=\_\_\_\_\_

65.  $\frac{0.692}{\sqrt{0.9}} \text{Ln} \left[ \frac{\sqrt{(0.238)^2 + (0.00766)} + \sqrt{0.0084}}{\sqrt{7.72 + (91.8)(0.00965)}} \right]$  ----- 65=\_\_\_\_\_

\*66. A cantaloupe has a diameter of 15 cm. The peel is 0.5 cm thick and the seeds occupy one-sixth the total volume of the cantaloupe. What percent of the melon is edible ?

66=\_\_\_\_\_ %

67. Seventy-eight congruent circles are drawn on a piece of paper such that their centers fall on a large circle and they are tangent. What is the diameter of the large circle divided by the radius of the small circles ?

67=\_\_\_\_\_

68. A checkerboard is 15 x 15 inches. There are 64 squares. What is the distance between the center of the black square in one corner and the center of one of the red squares nearest the opposite corner ?

68=\_\_\_\_\_ in.

TWO GEOMETRIC DRAWINGS HERE