PSIA
Private Schools Interscholastic Association

TEST PACKET

Calculator Applications
2019

District and State Tests

CONTESTANT ID #: _____

GRADE LEVEL: _____

PSIA
Private Schools Interscholastic Association

Calculator Applications
DISTRICT Contest
Grades 6-8

2019

Grader #1 Score: _____

Grader #2 Score:_____

Grader #3 Score: _____

FINAL SCORE: _____

(Please do not open test until the signal is given to begin.)

1:     202 + 543 + 148   --- 1=_____

2:     425 + 233 + 917   --- 2=_____

3:     105 + 488 – 368   --- 3=_____

4:     879 + 395 – 951 + 937   --- 4=_____

5:     9.3 + 0.551 + 3.21 – 4.83   --- 5=_____

6:     0.00425 – 0.00718 + 0.0089 + 0.0035 + 0.0757   --------------------- 6=_____

7:     65.2 + 45.1 + 88.1 – 78.8 + 37.1   ------------------------------------- 7=_____

8:     6400 – 751 – 305 – 736 – 3280   ------------------------------------- 8=_____

9:     0.0386 × 0.848 × 0.0513   --- 9=_____

10:    38.7 × 6.27 × 3.41   --- 10=_____

11:    What is the (positive) difference between pi and the square root of 2? ----- 11=_____

12:    What is the value of eighteen dimes and eighteen nickels? ---------------- 12=$_____

13:    Liz drove from Austin to Dallas, a distance of 195 miles in 3 hr 15 min. What
was her average speed? --- 13=_____ mph

14:      $(4290 - 7580) - (313000 - 63900)$ ---------------------------------- 14=_____

15:      $(3200 + 6330) \times (5.47 + 4.84)$ ---------------------------------- 15=_____

16:      $(-25.2 + 8.44) + (0.582 + 0.103 - 0.311)$ --------------------------- 16=_____

17:      $\left[\dfrac{6.81 + 8.83}{0.191 + 93.8} \right] + 0.51$ -- 17=_____

18:      $(-0.47 - 0.00773 - 0.00539)(6.4)(0.6)$ --------------------------- 18=_____

19:      $\left\{ \dfrac{0.759 - 0.097}{0.187} \right\} - \left\{ \dfrac{-0.0427 + 0.292}{-0.00267} \right\}$ ------------------------------ 19=_____

20:      $(0.304)\left[\dfrac{9160}{7} - \dfrac{987000}{7} - \dfrac{696000}{7} \right]$ ---------------------------------- 20=_____

21:      $\dfrac{(6000)(481)(-9650)}{449000} - \left(\dfrac{5960}{4.41 + 6.42} \right)$ ---------------------------------- 21=_____

22:      $\dfrac{(-0.557)(-87400 + 66900)(1390)}{83000} - \left\{ \dfrac{232}{-0.926 + 0.711} \right\}$ --------------- 22=_____

23:      $(0.254 - 2.6)(61.6)\left[\dfrac{0.168}{0.291 + 4.44} \right]$ ---------------------------------- 23=_____

24:      Anisa earns tips waiting tables at a restaurant. She earned $36.50 on Monday and $48.20 on Tuesday. How much should she earn on each of Wednesday and Thursday to average $42.00 in tips per day for the 4-day week? ------------- 24=$ _____

25:      Bottled water costs $1.69 per bottle. How many bottled waters can be purchased with $62.00? -- 25=_____ (integer)

26:      One phone plan for calling the United Kingdom from the U.S. charges $15 per month plus 8¢/min. How much will it cost over one year for Jodie to call her family in London from San Antonio nine times a month and talk for an average of 24 minutes each time? -- 26=$ _____

27:   $\left(7 \times 10^7\right) + \left(1.33 \times 10^8\right) + \left(5.98 \times 10^7\right)$ --------------------------------   27=_____

28:   $\dfrac{\left(6.39 \times 10^2\right)}{349000 + 8560} + \dfrac{\left(4.88 \times 10^3\right)}{(5760)(6740)}$ ---   28=_____

29:   $\dfrac{(0.00326 + 0.00116)}{(0.951 + 0.216)} \times \left[\dfrac{\left(7.91 \times 10^{-8}\right) - \left(7.19 \times 10^{-7}\right)}{(0.226)(-0.00689)}\right]$ ---------------   29=_____

30:   $\left(7.89 \times 10^{-8}\right)(25.1 + 871) - \left(5.11 \times 10^{-9}\right)(19 - 23.5)$ -----------------   30=_____

31:   $\dfrac{1}{0.25} + \dfrac{1}{0.417} + \dfrac{1}{0.927}$ --   31=_____

32:   $\dfrac{(0.0813)}{(0.0802)} + (1/0.649) + (1/3.26)(0.106)$ ----------------------------   32=_____

33:   $\left(\dfrac{1}{1/0.483}\right)(473 + 2150 + 6930) - (0.129)(4.15)$ ----------------------   33=_____

34:   $\dfrac{(-410 + 8860 - 35.6)(252)(661 + 3150)}{(-1990 - 8480 - 54.6)(727 - 576)(-6280)}$ --------------------------   34=_____

35:   The sides of a square are reduced from 30 cm to 28.7 cm. What is the percent decrease in perimeter?   ---   35=_____ %

36:   A farmer plants a 12.4-acre field in winter wheat. The recommended amount of seed to plant for his agricultural region is 800,000 seeds per acre. Seed weight is 15,000 seeds per pound. This seed is expected to yield 2.15 bushels per pound. How many bushels of wheat will be harvested?   --------------------------------------   36=_____ bushels

37.

RECTANGLE

5.7

1.33

Perimeter = ?

37. _____
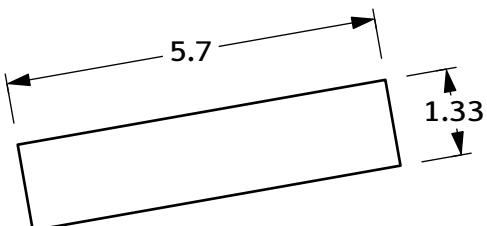
38.

CIRCLE

R = ?
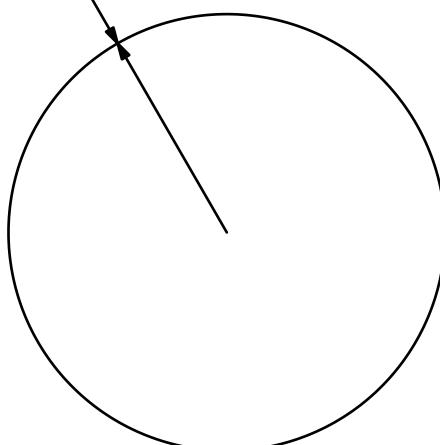
Area = 96.7

38. _____

39:    $(-2.44 - 8.36)^2 + (0.492)(-12)(0.906)$ ------------------------------- 39=_____

40:    $\left[\dfrac{0.903 + 0.095}{0.0433 - 0.0674}\right]^2 + \left[\dfrac{-4730}{9.31}\right]$ -- 40=_____

41:    $\dfrac{(1/66.9) - (1/158)}{(1/23.8)} + (1.24)^2$ -- 41=_____

42:    $\dfrac{\sqrt{57.9 + 792}}{8.78} - \dfrac{\sqrt{512 - 72.8}}{101}$ -- 42=_____

43:    $\sqrt{\dfrac{0.0344 + 0.0309}{0.786 + 0.0181}} + \sqrt{1/0.549}$ -- 43=_____

44:    $\left[\dfrac{6.38 - 2.25}{0.0248}\right]^{1/2} \times \left[\dfrac{0.0798 - 0.0832}{0.939}\right]^2$ ----------------------------- 44=_____

45:    $\sqrt{\dfrac{\left(5.52 \times 10^3\right) + \left(4.9 \times 10^4\right)}{0.0889}} - \dfrac{1}{(0.0412)(0.0381)}$ ---------------------- 45=_____

46:    $\left[1/\left(1.87 \times 10^4\right) - 1/\left(7.93 \times 10^6\right)\right]^2$ -- 46=_____

47:    On a map of France, Paris and Toulouse are 12.7 cm apart. The map scaling
is 1 cm per 45 km. Orleans is 1/6 of the way from Paris to Toulouse. How far apart
are Paris and Orleans? -- 47=_____ km

48:    The density of a rectangular piece of mahogany is 650 kg/m^3. The piece is
46 cm by 67 cm by 12 cm. What is the mass of the block? ----------------------- 48=_____ kg

49.   RIGHT TRIANGLE

50.   RIGHT TRIANGLE

49. _____
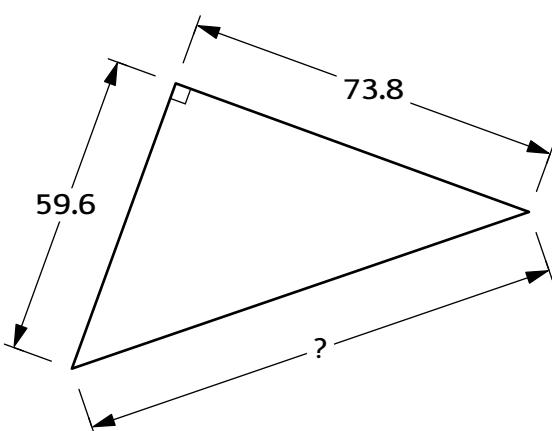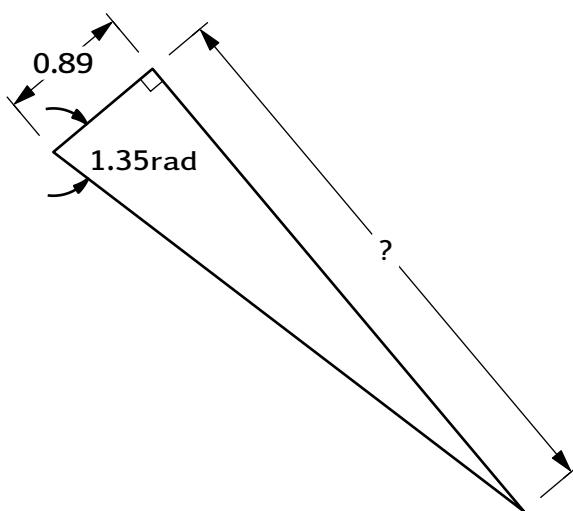
50. _____

51: $\left[\dfrac{0.698(-2.62 - 0.978)}{3.37(-0.229 + 0.788)} + \sqrt{0.0741}\right]^3$ -- 51=_____

52: $(2.70)(-1.12)(1/0.761) + 1/(0.149 + 0.964)$ -------------------------- 52=_____

53: $\sqrt{6640} + \sqrt{440000} - \sqrt{\left(\dfrac{826000 + 726000}{1640}\right)^3}$ -------------------------53=_____

54: $\sqrt[3]{\dfrac{(0.0259)(7.08) - (-\pi)(0.0406)}{0.48 + 9.09}}$ ------------------------------------ 54=_____

55: $\dfrac{(8.97 + 5.48)^2}{(1.41 + 22.6)} + \dfrac{\sqrt{\sqrt{577}}}{649}$ ------------------------------------ 55=_____

56: $\dfrac{[(38.9)(2.4)]^{0.299}}{92.1} - (1.52)(7.76)(8.90)$ ---------------------------- 56=_____

57: $\sqrt{562 + \dfrac{461 \times 443}{\pi}} - \left[\dfrac{2570 / 400}{5.44}\right]^2$ ---------------------------------- 57=_____

58: $\sqrt{\dfrac{2.24 \times 10^9}{(91.9)(442)(7490)}} - \dfrac{8.43 \times 10^{-1}}{0.931}$ ---------------------------------- 58=_____

59: Calculate $(323468)^{71537}$. --- 59=_____

60: There are 8 vanilla, 12 chocolate, 5 strawberry, and 7 rocky road ice cream cartons left at the store. Glen chooses one at random. What is the probability it is chocolate? -- 60=_____

61.   HEMISPHERE

R = 6.4

Volume = ?

61. _____

62.   RECTANGULAR PRISM

1.93

2.45   2.84
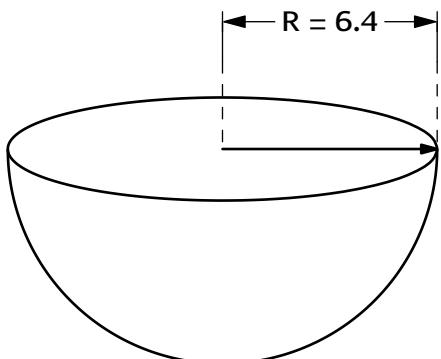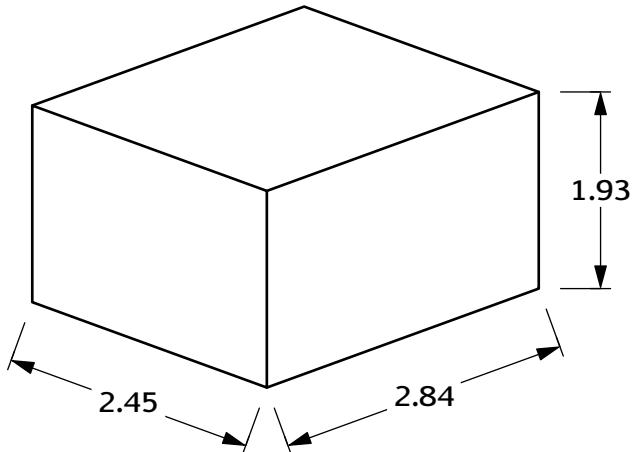
Total Surface Area = ?

62. _____

63:   $e^{0.495} - e^{0.443} + \sqrt{\dfrac{206}{96000}}$ --- 63=_____

64:   **(deg)** $\cos(85° - 202°)$ ------------------------------------- 64=_____

65:   **(deg)** $\tan(38° - 250°) + \tan(203°)$ ---------------------------- 65=_____

66:   **(rad)** $(0.594)\cos(5.95) - (0.665)\cos(6.08) + \dfrac{95.2}{41.9}$ -------------------- 66=_____

67:   **(rad)** $\dfrac{(1450)\tan(0.56)}{(8570)\sin(0.9)} + \dfrac{(737)(926)}{(8610)(93.6)}$ ------------------------------ 67=_____

68: $\left[\pi + 9.21 - 2.5\right]^{(0.23 - 0.687)} + e^{0.847}$ --------------------------- 68=_____

69:   $\left\{\dfrac{-3.24 + 5.75}{-0.093 + 7.97}\right\} \Big/ \left\{\dfrac{-0.0937 + 0.0759}{1.22 + 0.0236}\right\}$ --------------------------- 69=_____

70:   **(rad)** $\cos\left[\dfrac{6(4.85)}{9.85}\right] - \sin(3.16)$ -------------------------------------- 70=_____

71:   A snowmobile accelerated at a constant rate from rest to 16 ft/s in 12 seconds. What distance was covered in that acceleration? -------------------- 71=_____ft

72:   At a fast food Italian restaurant, spaghetti costs $6.49 and lasagna costs $7.49. Megan bought 32 dishes for a total of $252.37 (after the 8% sales tax). How many more lasagna dishes did she buy than spaghetti dishes? ------------------ 72=_____ (integer)

73. RHOMBUS

$132°$ 16.4
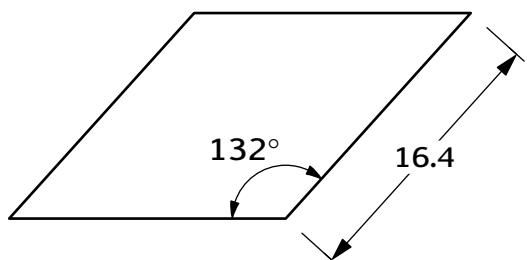
Area = ?

73. _____

74. RIGHT CONE AND CYLINDER

21

15

Diameter=6
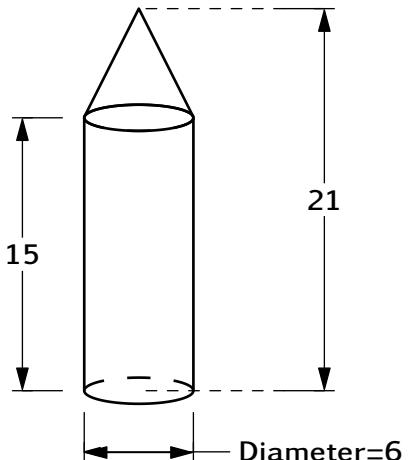
Total Volume = ?

74. _____

75: $\dfrac{(5.68)^{0.783}(5.68)^{0.392}(5.68)^{0.656}}{(5.68)^{0.882}(5.68)^{0.81}}$ ----------------------------------- 75=_____

76: $\dfrac{1}{6}\text{Log}\left[\dfrac{33.6 + (492)(853) - (3100)}{(518) - (197)}\right]^{6}$ ----------------------------------- 76=_____

77: $e^{\text{Ln}(0.183)} + 10^{\text{Log}(0.99)} + 0.887$ ------------------------------------ 77=_____

78: $e^{[0.188 - 0.543 + 0.826]} + \dfrac{(47.1)(820)}{(1780)(714)}$ ------------------------------ 78=_____

79: $1 + (0.24) + (0.24)^{2} + (0.24)^{3} + (0.24)^{4} + (0.24)^{5}$ ------------------------- 79=_____

80: **(rad)** $[\sin(1.78)\cos(0.45) - \cos(1.78)\sin(0.45)] + \sqrt{2.11}$ --------------- 80=_____

PSIA – Calculator Applications – 2019 – District Test
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ANSWERS

1= 893
8.93×10^2

2= 1580
1.58×10^3

3= 225
2.25×10^2

4= 1260
1.26×10^3

5= 8.23
8.23×10^0

6= 0.0852
8.52×10^{-2}

7= 157
1.57×10^2

8= 1330
1.33×10^3

9= 0.00168
1.68×10^{-3}

10= 827
8.27×10^2

11= 1.73
1.73×10^0

12= $ 2.70

13= 60.0
6.00×10^1

14= −252000
-2.52×10^5

15= 98300
9.83×10^4

16= −16.4
-1.64×10^1

17= 0.676
6.76×10^{-1}

18= −1.86
-1.86×10^0

19= 96.9
9.69×10^1

20= −72700
-7.27×10^4

21= −62600
-6.26×10^4

22= 1270
1.27×10^3

23= −5.13
-5.13×10^0

24= $ 41.65

25= 36 (integer)

26= $ 387.36

27= 2.63×10^8

28= 0.00191
1.91×10^{-3}

29= 1.56×10^{-6}

30= 0.0000707
7.07×10^{-5}

31= 7.48
7.48×10^0

32= 2.59
2.59×10^0

33= 4610
4.61×10^3

34= 0.810
8.10×10^{-1}

35= 4.33
4.33×10^0

36= 1420
1.42×10^3

37= 14.1
1.41×10^1

38= 5.55
5.55×10^0

39= 111
1.11×10^2

40= 1210
1.21×10^3

41= 1.74
1.74×10^0

42= 3.11
3.11×10^0

43= 1.63
1.63×10^0

44= 0.000169
1.69×10^{-4}

45= 146
1.46×10^2

46= 2.85×10^{-9}

47= 95.3
9.53×10^1

48= 24.0
2.40×10^1

49= 94.9
9.49×10^1

50= 3.97
3.97×10^0

51= -1.19
-1.19×10^0

52= -3.08
-3.08×10^0

53= -28400
-2.84×10^4

54= 0.319
3.19×10^{-1}

55= 8.70
8.70×10^0

56= -105
-1.05×10^2

57= 255
2.55×10^2

58= 1.81
1.81×10^0

59= 6.36×10^{394156}

60= 0.375
3.75×10^{-1}

61= 549
5.49×10^2

62= 34.3
3.43×10^1

63= 0.129
1.29×10^{-1}

64= -0.454
-4.54×10^{-1}

65= -0.200
-2.00×10^{-1}

66= 2.18
2.18×10^0

67= 0.982
9.82×10^{-1}

68= 2.68
2.68×10^0

69= -22.3
-2.23×10^1

70= -0.964
-9.64×10^{-1}

71= 96.0
9.60×10^1

72= 20 (integer)

73= 99.9
9.99×10^1

74= 481
4.81×10^2

75= 1.27
1.27×10^0

76= 3.11
3.11×10^0

77= 2.06
2.06×10^0

78= 1.63
1.63×10^0

79= 1.32
1.32×10^0

80= 2.42
2.42×10^0

CONTESTANT ID #: _____

GRADE LEVEL: _____

Calculator Applications
STATE Contest
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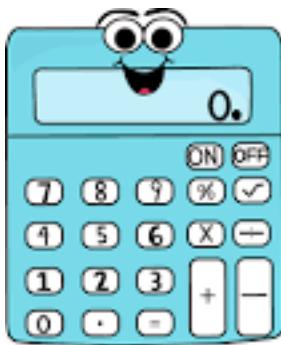
2019

Grader #1 Score: _____

Grader #2 Score:_____

Grader #3 Score: _____

FINAL SCORE: _____

(Please do not open test until the signal is given to begin.)

1:     679 + 876 + 881 -- 1=_____

2:     801 + 268 − 401 -- 2=_____

3:     280 + 811 − 497 -- 3=_____

4:     854 + 161 − 470 + 861 -- 4=_____

5:     1540 + 770 + 3020 + 584 -- 5=_____

6:     −0.547 − 5.37 − 17.4 − 55.4 + 0.525 ----------------------------------- 6=_____

7:     −0.0709 + 0.054 + 2.93 − 9.5 − π ------------------------------------ 7=_____

8:     92500 − 1000 + 1660 + 533 − 1600 --------------------------------- 8=_____

9:     327 × 1.36 × 62.6 --- 9=_____

10:    608 × 81.7 / 6.72 --- 10=_____

11:    Find the quotient when pi is divided by the cube root of 17. --------------- 11=_____

12:    A basketball player scored five 1-point shots, twelve 2-point shots, and two
3-point shots. How many total points did he score? ----------------------------- 12=_____ (integer)

13:    A George Strait concert in the early 1980s listed ticket prices as $16.00 at
the door or $14.50 if bought in advance. What is the discount in buying in advance?   13=_____ %

14:     $(91.4 - 97.2) - (-63.4 - 3.23)$ -- 14=_____

15:     $(-7800 + 4810) / (-129 - \pi)$ -- 15=_____

16:     $(-4.21 + 901) + (975 - 727 + 6.95)$ --------------------------------- 16=_____

17:     $\left[\dfrac{846000 - 191000}{1110 - 3520}\right] - 212$ --------------------------------------- 17=_____

18:     $(-0.0579 - 8.97 + 0.378)(-4.53)(-0.31)$ ---------------------------- 18=_____

19:     $\left\{\dfrac{-538 + 7.46}{-698}\right\} - \left\{\dfrac{148 - 45.7}{-2.38}\right\}$ ------------------------------------- 19=_____

20:     $(602)\left[\dfrac{7.16}{5} - \dfrac{7.66}{5} + \dfrac{367}{5}\right]$ -------------------------------------- 20=_____

21:     $\dfrac{(3.8)(71)(1590)}{387} + \left(\dfrac{-\pi}{-3.67 + 0.287}\right)$ ---------------------------------- 21=_____

22:     $\dfrac{(5.81)(-392 + 58.1)(-4.45)}{63} - \left\{\dfrac{609}{121 - 525}\right\}$ --------------------------- 22=_____

23:     $(-22200 + 622000)(0.0472)\left[\dfrac{41.8}{4700 - 7920}\right]$ --------------------------- 23=_____

24:     A swimmer swam 20 laps. Each lap is 50 meters. It took
8 minutes 10 seconds. What was the swimmer's average speed? ----------------- 24=_____ m/s

25:     Jimmy has sixteen more quarters than nickels. In total, he has $56.50. How
many total coins does he have? -- 25=_____ (integer)

26:     A goat is tied to a pole in the middle of a field by a 12.8-foot leash. How much
grazing area does the goat have? -- 26=_____ ft^2

27:   $\left(9.63 \times 10^3\right) - \left(1.57 \times 10^4\right) + \left(5.52 \times 10^4\right)$ ------------------------------ 27=_____

28:   $\dfrac{\left(5.51 \times 10^1\right)}{1.21 + 571} - \dfrac{\left(1.47 \times 10^0\right)}{(77)(36.1)}$ --------------------------------------- 28=_____

29:   $\dfrac{(0.562 - 0.0052)}{(0.624 - 0.00958)} \times \left[\dfrac{\left(9.57 \times 10^7\right) + \left(9.26 \times 10^8\right)}{(4050)(-13700)}\right]$ -------------------- 29=_____

30:   $\left(1.53 \times 10^{-4}\right)(9370 + 825) + \left(6.34 \times 10^{-3}\right)(510 + 2740)$ --------------- 30=_____

31:   $\dfrac{1}{87900} - \dfrac{1}{3150} - \dfrac{1}{99400}$ -- 31=_____

32:   $\dfrac{(24.7)}{(-\pi)} + (1/51.3) - (1/54.4)(24.6)$ ------------------------------------- 32=_____

33:   $\left(\dfrac{1}{1/4570}\right)(-\pi - 6.93 + 7.08) - (256)(-5.96)$ -------------------------- 33=_____

34:   $\dfrac{(0.0962 + 1.46 - 0.812)(-0.119)(0.0176 - 8.44)}{(6.3 + 2.96 - 1.49)(0.0951 - 0.0308)(-0.782)}$ --------------------- 34=_____

35:   A tree grew from 1.76 meters tall to 2.14 meters tall. What is the percent increase in height? --- 35=_____ %

36:   The square of one-half of a positive number, added to six times the number, is 19.3. What is the number? --- 36=_____

37.   SQUARE

A

B

AB = 7.41

Area = ?

37. _____

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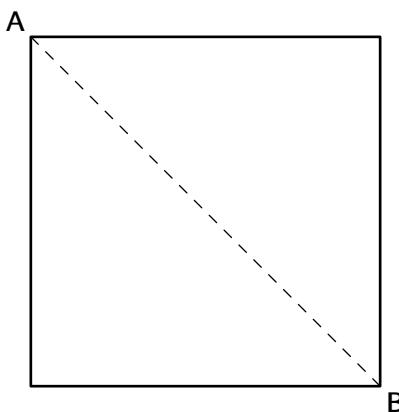
38.   REGULAR HEXAGON

?
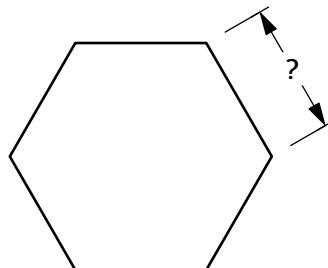
Perimeter = 57600

38. _____

39:      $(-3.85 - 4.61)^2 + (6.78)(0.574)(-0.292)$ ------------------------------ 39=_____

40:      $\left[\dfrac{35300 + 981}{21500 - 50300}\right]^2 - \left[\dfrac{4980}{-4360}\right]$ ------------------------------- 40=_____

41:      $\dfrac{(1/0.0087) + (1/0.0747)}{(1/0.00947)} + (0.742)^2$ ------------------------------- 41=_____

42:      $\dfrac{\sqrt{1.88 + 0.155}}{0.353} + \dfrac{\sqrt{9.09 - 3.73}}{0.0215}$ -- 42=_____

43:      $\sqrt{\dfrac{0.332 + 0.71}{0.0751 + 4.16}} + \sqrt{1/0.25}$ -- 43=_____

44:      $\left[\dfrac{0.0312 - 0.00901}{0.0851}\right]^{1/2} \times \left[\dfrac{-0.789 - 0.0115}{0.153}\right]^2$ ------------------------- 44=_____

45:      $\sqrt{\dfrac{\left(5.47 \times 10^{-2}\right) + \left(2.04 \times 10^{-1}\right)}{2.47}} - \dfrac{1}{(9.36)(0.115)}$ ---------------------- 45=_____

46:      $\left[1/\left(1.34 \times 10^1\right) - 1/\left(7.57 \times 10^0\right)\right]^2$ ------------------------------------- 46=_____

47:      A Ferris wheel spins at 255 degrees per minute. How many rotations will it make during a six-minute ride? -- 47=_____ rotations

48:      The city plans to build sidewalks around the new City Hall, a rectangular 410 feet by 230 feet building. The sidewalk will also be rectangular, extending 8 feet from each side of the building. It costs $19 per 800 square feet of concrete for the sidewalk. What is the total cost? --- 48=$ _____

49.   RIGHT TRIANGLE

54°

122
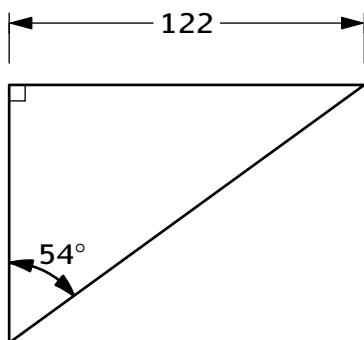
Area = ?

49. _____

50.   RIGHT TRIANGLE

4.37×10^8

2.97×10^8

rad?
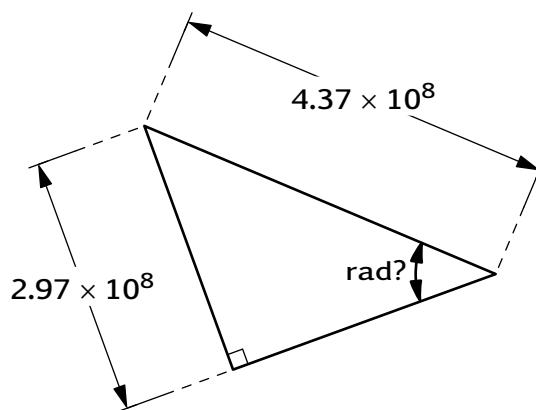
50. _____

51: $\left[\dfrac{4.43(1.24 - 0.801)}{5.3(0.908 + 5.04)} + \sqrt{2.41}\right]^3$ --- 51=_____

52: $(7.92)(-42.4)(1/48.8) - 1/(-3.09 - 7.30)$ ----------------------------- 52=_____

53: $\sqrt{8370} - \sqrt{340} + \sqrt{\left(\dfrac{355 + 382}{202}\right)^3}$ ------------------------------- 53=_____

54: $\sqrt[3]{\dfrac{(94)(\pi) - (-25.3)(9210)}{24.1 + 7920}}$ ------------------------------------- 54=_____

55: $\dfrac{(97.5 + 84.5)^2}{(23.5 + 2.89)} + \dfrac{\sqrt{\sqrt{79200}}}{0.163}$ -------------------------------- 55=_____

56: $\dfrac{[(0.528)(6.58)]^{0.561}}{8.73} + (9.44)(4.07)(0.629)$ -------------------------- 56=_____

57: $\sqrt{4750 - \dfrac{5960 \times 781}{3680}} + \left[\dfrac{8260 / 2060}{0.219}\right]^2$ ---------------------------- 57=_____

58: $\sqrt{\dfrac{3.05 \times 10^5}{(696)(57.2)(122)}} - \dfrac{4 \times 10^4}{0.876}$ ------------------------------- 58=_____

59: How many digits are in the number $32 \times 31 \times 30 \times 29 \times \cdots \times 2 \times 1$ when worked out? --- 59=_____ (integer)

60: A bowl of treats contain 14 chocolate bars, 7 peppermints, 3 butterscotches, 2 taffies, and 22 lollipops. A candy is selected at random. What is the probability it is a lollipop or a butterscotch? --- 60=_____

61. CUBE
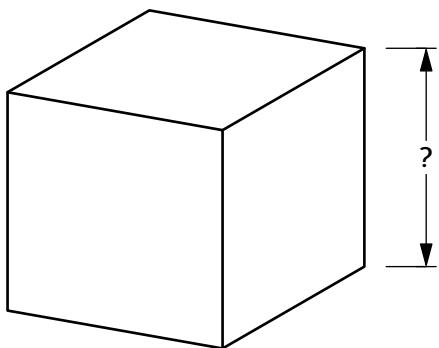
Total Surface Area = 0.0488

61. _____

62. RECTANGULAR PRISM

Area = 72.3
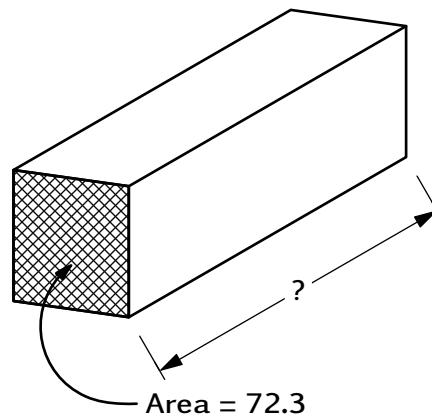
Volume = 1600

62. _____

63: $e^{0.952} + e^{0.432} + \sqrt{\dfrac{0.0913}{8.87}}$ --- 63=_____

64: (deg) $\tan(267° - 72°)$ --- 64=_____

65: (deg) $\cos(77° - 276°) + \sin(199°)$ ------------------------------ 65=_____

66: (rad) $(3.95)\sin(4.99) + (3.14)\cos(0.99) - \dfrac{\pi}{0.203}$ --------------------- 66=_____

67: (rad) $\dfrac{(64.1)\cos(2.32)}{(174)\cos(2.95)} - \dfrac{(4.55)(-9.47)}{(5.03)(9.69)}$ ------------------------------- 67=_____

68: $\left[\, 45.7 - 41.5 + 0.414 \,\right]^{(1.63 + 0.51)} + \sqrt{e^{3.65}}$ ------------------------- 68=_____

69: $\left\{\dfrac{37300 + 70200}{25600 + 5820}\right\} \Big/ \left\{\dfrac{977000 + 287000}{50900 - 4910}\right\}$ -------------------------- 69=_____

70: (rad) $\cos\left[\dfrac{2(5.97)}{673}\right] - \sin(1.78)$ ------------------------------------- 70=_____

71:     In 1972, a quarter-pound hamburger costs 55¢. In 2018, the same hamburger costs $3.79. Assuming an exponential model, what will the cost of this hamburger be in 2042? --- 71=$_____

72:     What is the smallest integer *N* so that 3^N exceeds 3.3 trillion? ----------- 72=_____ (integer)

73.   SQUARE AND SECTOR OF CIRCLE

R = ?
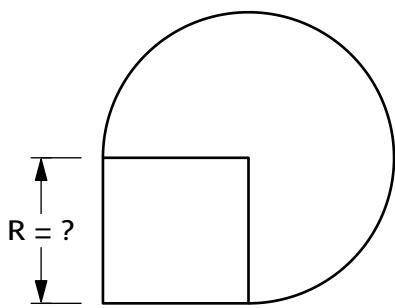
Total Area = 100

73. _____

74.   SQUARE-BASED PYRAMID WITH CAVITY

7.5

7.5

10
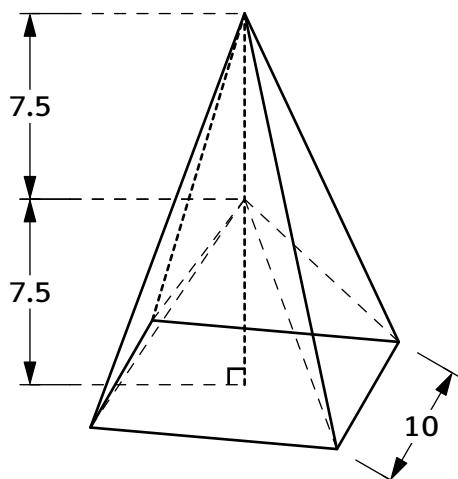
Volume = ?

74. _____

75: $\dfrac{(0.72)^{2.05}(0.72)^{0.526}(0.72)^{0.318}}{(0.72)^{0.709}(0.72)^{0.33}}$ -------------------------------------- 75=_____

76: $\dfrac{1}{2}\text{Log}\left[\dfrac{25500 + (8980)(399000) - (602000)}{(70600) - (17200)}\right]^{2}$ ------------------------- 76=_____

77: $e^{\text{Ln}(0.0863)} + 10^{\text{Log}(0.595)} - 0.00789$ ------------------------------- 77=_____

78: $e^{[0.932 + 0.201 + 0.134]} - \dfrac{(26.4)(0.187)}{(0.783)(9.28)}$ ----------------------------- 78=_____

79: $1 + 0.114 + (0.114)^{2} + (0.114)^{3} + (0.114)^{4}$ ------------------------- 79=_____

80: (rad) $\sin(1.27)\cos(4.89) - \cos(1.27)\sin(4.89)$ ---------------------- 80=_____

ANSWERS

1= 2440
2.44×10^3

2= 668
6.68×10^2

3= 594
5.94×10^2

4= 1410
1.41×10^3

5= 5910
5.91×10^3

6= −78.2
-7.82×10^1

7= −9.73
-9.73×10^0

8= 92100
9.21×10^4

9= 27800
2.78×10^4

10= 7390
7.39×10^3

11= 1.22
1.22×10^0

12= 35 (integer)

13= 9.38
9.38×10^0

14= 60.8
6.08×10^1

15= 22.6
2.26×10^1

16= 1150
1.15×10^3

17= −484
-4.84×10^2

18= −12.1
-1.21×10^1

19= 43.7
4.37×10^1

20= 44100
4.41×10^4

21= 1110
1.11×10^3

22= 139
1.39×10^2

23= −368
-3.68×10^2

24= 2.04
2.04×10^0

25= 366 (integer)

26= 515
5.15×10^2

27= 49100
4.91×10^4

28= 0.0958
9.58×10^{-2}

29= −16.7
-1.67×10^1

30= 22.2
2.22×10^1

31= −0.000316
-3.16×10^{-4}

32= −8.29
-8.29×10^0

33= −12100
-1.21×10^4

34= −1.91
-1.91×10^0

35= 21.6
2.16×10^1

36= 2.87
2.87×10^0

37= 27.5
2.75×10^1

38= 9600
9.60×10^3

ANSWERS

39= 70.4
7.04×10^1

40= 2.73
2.73×10^0

41= 1.77
1.77×10^0

42= 112
1.12×10^2

43= 2.50
2.50×10^0

44= 14.0
1.40×10^1

45= −0.605
-6.05×10^{-1}

46= 0.00330
3.30×10^{-3}

47= 4.25
4.25×10^0

48= $ 249.28

49= 5410
5.41×10^3

50= 0.747
7.47×10^{-1}

51= 4.21
4.21×10^0

52= −6.79
-6.79×10^0

53= 80.0
8.00×10^1

54= 3.09
3.09×10^0

55= 1360
1.36×10^3

56= 24.4
2.44×10^1

57= 394
3.94×10^2

58= −45700
-4.57×10^4

59= 36 (integer)

60= 0.521
5.21×10^{-1}

61= 0.0902
9.02×10^{-2}

62= 22.1
2.21×10^1

63= 4.23
4.23×10^0

64= 0.268
2.68×10^{-1}

65= −1.27
-1.27×10^0

66= −17.6
-1.76×10^1

67= 1.14
1.14×10^0

68= 32.6
3.26×10^1

69= 0.124
1.24×10^{-1}

70= 0.0216
2.16×10^{-2}

71= $ 10.38

72= 27 (integer)

73= 5.46
5.46×10^0

74= 250
2.50×10^2

75= 0.544
5.44×10^{-1}

76= 4.83
4.83×10^0

77= 0.673
6.73×10^{-1}

78= 2.87
2.87×10^0

79= 1.13
1.13×10^0

80= 0.460
4.60×10^{-1}