***Circuit Training* – Do you know your calculator?** **NAME**_____

Use your calculator to complete the first problem in the space provided. Circle your answer. Find your answer among the choices. Put #2 in the problem blank. Work that question and proceed in this manner until finished. You may use any of the tools on your calculator to solve these problems.

Answer: 4.272 #1____ Evaluate: $\sqrt[3]{76.5}$	Answer : 1.024 # _____ Solve for x. $\lvert x^3 - 4x \rvert = 7 - x$ To advance in the circuit, find the sum of the two solutions.
Answer: 0.813 # _____ Find the minimum value of the function $h(x) = 1 + x + e^{x^2+3x}$.	Answer: 4.277 # _____ Let $f(x) = e^{x-4} + 2.5x - 11.7$. Find the zero of the function.
Answer: 1.527 # _____ Solve for x on the closed interval [2,4]. $\frac{20}{3 + e^{\tan x}} = 5.3$	Answer: –0.144 # _____ Solve for x. $(2x+1)^{-2} = 10 - e^{x^2+2}$ There are two solutions. To advance in the circuit, find the smallest solution.
Answer: 6.990 # _____ If $f(x) = \ln(x+4)$ and $g(x) = \tan(x^2)$, find $f(g(3.2))$.	Answer: 1.682 # _____ Evaluate: $\ln(5.86)$
Answer: 0.456 # _____ If $h(x) = \begin{cases} x\sec x, & x \le 1 \\ x\tan^{-1} x, & x > 1 \end{cases}$ find $h(0.9)$ and $h(1.1)$. To advance in the circuit, find the largest of the two values.	Answer: –1.256 # _____ If $f(x) = x^5 - 2x^4 + \sin^2 x + k$, find k so that $f(2.1) = 1.212$.

Answer: 1.622 # _____ Solve for x. $\frac{2}{x+2}-\frac{7}{x-5}=10$ There are two solutions. To advance in the circuit, find the positive solution.	Answer: 1.768 # _____ If $f(x)=4.5x^3-3.2x^2-\sin x$, find $f(1.5)$.
Answer: –0.321 # _____ Solve for x. $\lvert 3x-4\rvert = 2.5\sqrt{3-x}$ There are two solutions. To advance in the circuit, find the solution closest to zero.	Answer: –1.478 # _____ If the radius of a cone is 0.9 inches and the height is twice the radius, what is the volume (in inches^3) of the cone? $\left(V=\frac{1}{3}\pi r^2 h\right)$
Answer: 4.245 # _____ Evaluate: $(51.4)^{3/7}$	Answer: 1.448 # _____ If the volume of a sphere is 4.5 m^3, find the radius of the sphere. $\left(V=\frac{4}{3}\pi r^3\right)$
Answer: 2.890 # _____ A remote control plane climbs at takeoff with a slope $m=0.178$. How far off the ground is the plane when it has traveled 24 feet in the horizontal direction after takeoff?	Answer: –0.176 # _____ Find the maximum value of the function $g(x)=\frac{4.3x}{x^2+7}$
Answer: 4.194 # _____ If $g(x)=\sin^2(2x)$, find $g(1.2)$.	Answer: 5.411 # _____ Evaluate: $e^{0.52}$