This assignment is due at midnight, Sunday, November 29th. I will show you where to upload this assignment in class.

1. Please print your name at the top of the first page of your assignment.
2. This is a formative as well as a summative assessment, so please leave room on your pages for your instructor's annotations.
3. Use only white paper with no lines. No graph paper. No highlighters. Circle final answers where appropriate.
4. Only white background for your PDFs. No college-ruled paper or Smartphone photos of a spiral notebook.
5. Amateur photos/scans of written work that are gray or difficult to read, or have black or colored borders will be sent back for revision, possibly with a penalty.
6. Ask me anything you want about these two graphing exercises. Ask no one else. Do your own work.

Ideally, you will have a pen tablet, and can make PDFs directly with it. If not, you have options:

Suggestions:

If you have a decent printer-scanner that can make PDFs, that's great.

If you have a pen tablet and you already use it to write math, that's super-great.

If all you have is a smartphone to take pictures with, that is probably not good enough, unless you spend $30 or $40 on RocketBook, which is a re-usable notebook that produces beautiful PDFs.

They should be able to help you at the Learning Commons of your nearest Aims branch.   We have Learning Commons in Greeley, Windsor, Loveland, and Fort Lupton. I think they can hook you up.

There is also a FedEx copy service in Greeley, that can produce clean, multi-page PDFs of very high quality. There used to be a Kinko's, but I don't know if there's still one in operation in Greeley.

SHOW ALL WORK. USE A LEGEND AND LETTER LABELS TO LABEL KEY POINTS, AS DEMONSTRATED IN CLASS. CIRCLE FINAL ANSWERS AND IMPORTANT 'SUB-ANSWERS.'

I DO NOT ACCEPT WORK ON RULED PAPER. I WANT YOU DOING MATH ON PLAIN WHITE PAPER.

1. (15 pts) Sketch the graph of the trigonometric polynomial $g(x) = 2\sin(x) + \cos(2x)$ on the interval $[0,\, 2\pi]$, showing all intercepts, extremes and inflection points. Your graphs must capture the essence of the shape, especially the concavity features. I want to see your work, with *exact* values and 4-decimal-place approximations for all *x*- and *y*-values in your legend.

    I want to see a very clear graph, and a list of the key points. I will demonstrate $g(x) = \sin(x) + \cos(x)$ (or something similar) in class, and present a rational function example, also.

    For the trigonometric polynomial, I will want to see EXACT solutions as well as 4-digit decimal approximations for the coordinate of the key points. I'll show you what I mean…

2. (15 pts) Sketch the graph of $R(x) = \dfrac{x^2 - 3x - 28}{x - 1}$. Show all intercepts, extremes, asymptotes (vertical and oblique), inflection points, and end behavior (This one has an oblique asymptote.). If you're a slave to scale, you can lose the essence of the graph's main features.

Organizing your presentation: