

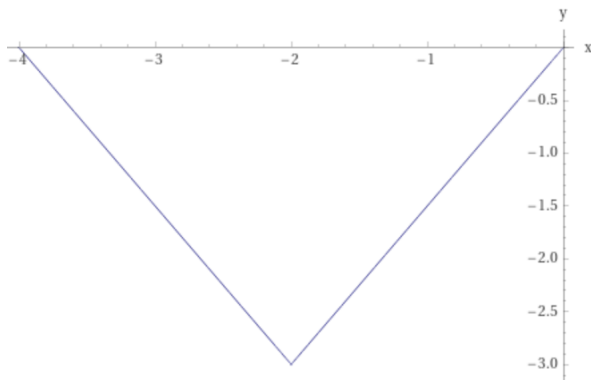
Assessment 1 - Math 141, Frank Thorne (thorne@math.sc.edu)

Wednesday, September 2, 2020

Instructions.

- Please work without books, notes, calculators, cell phones, or any assistance from others.
- Use of computers during the assessment is not allowed, except to look at the questions and ask me questions. You can ask me questions by email or by Blackboard **private** chat.
- Once you're done, please photograph your work, convert it to a single file in PDF format and rename it 141-[yourlastname]-a1.pdf and send it by email to thorne@math.sc.edu.
- This assessment is subject to the Carolina Honor Code.
- When finished, please don't leave! We'll have a half-length lecture afterwards.

1. The figure shows the graph of a function $g(x)$ with domain $[-4, 0]$ and range $[-3, 0]$.



Find the domains and ranges of the functions $1 - g(x)$ and $g(x - 2)$, and sketch their graphs.

2. Simplify $(x + 1)^2(x + 2)^3 + (x + 1)^3(x + 2)^2$.
3. Define the trigonometric functions $\sin(x)$, $\cos(x)$, $\tan(x)$, and $\sec(x)$.
4. Sketch the shifted exponential curves $y = 2^x - 1$ and $y = 2^{-x} - 1$.

When done, write out and sign: I pledge under the Honor Code that I have neither given nor received any unauthorized aid.