Math 425: Collected Homework 2, due in lab, 9/14

Fall 2021

Directions: This homework is due on 9/14 at the start of your lab. Late work will not be accepted. Each homework will be worth 10 points, and at least ONE of these points is awarded for "professionalism", meaning that your work is prepared suitably, according to the guidelines below.

- Write your name and lab number at the top of your work.
- Label each problem clearly.
- Make sure that your work is clear. Show your work to gain full credit.
- Do not submit torn or sloppy paper.
- Leave blank space for comments from the grader.
- Staple your work.

1. Evaluate each trig value below. You are required to show suitable work. You may use without any justification, the values for $\sin(\theta)$ and $\cos(\theta)$ when $\theta = \frac{\pi}{6}, \frac{\pi}{4}, \frac{\pi}{3}$. You may use without any justification, the values for $\sin(\theta)$ when $\theta = 0, \frac{\pi}{2}, \pi, \frac{3}{\pi}, 2\pi$. You should have all these values memorized. For ANY OTHER values, you must show suitable work.
   - (a) $\sin(\frac{-7\pi}{6})$
   - (b) $\tan(\frac{2\pi}{3})$
   - (c) $\cos(\frac{13\pi}{3})$
2. You are given: $\pi < \theta < \frac{3\pi}{2}$ AND $\sin(\theta) = -12/13$. Find the value of $\cos(\theta)$. Answer clearly and show your work.
3. For each function below, find the domain. Answer clearly and show work suitably.
   - $f(x) = \sqrt[4]{5-2x} \cdot \sqrt{3-x}$.
   - $f(x) = \frac{x^2+\pi}{\sin(x)}$.
   - $f(x) = \frac{\sqrt{3-x}}{x^2-1}$.
   - $f(x) = \frac{\sqrt{3}}{2\cos(x)-1}$