

## Math 121 – Exam 3A – Fall 2013

You may use a calculator to check your work. Cellphones are not permitted.

Show your work. No work will result in no points.

Each problem is worth 20 points

- 1) Evaluate the following:
  - a)  $\cos(15^\circ)$
  - b)  $\sin(7\pi/12)$
  - c)  $\sec(5\pi/12)$
  
- 2) Find all the solutions to  $2\sin(2\theta) = \sqrt{2}$  where  $0 \leq \theta < 2\pi$ .
  
- 3) Evaluate the following:
  - a)  $\arcsin(\sin(5\pi/6))$
  - b)  $\sin(\arccos(-1/3))$
  
- 4) You are on a camping trip. You step out of your tent and an angry sasquatch chases you west for 2 miles and then N  $45^\circ$  W for 3 miles before losing interest.
  - a) How far are you from your tent?
  - b) In what direction are you from the tent?
  
- 5) Let  $\pi/2 < \theta < \pi$  and let  $\sin(\theta) = 4/7$ . Evaluate the following:
  - a)  $\sin(2\theta)$
  - b)  $\cos(\theta/2)$