Math 122 Extra homework problems #1

December 11, 2012

Question 1. Draw some triangles and compute:

a) $\sin^{-1} \frac{-1}{2}$

b) $\sin^{-1} \frac{1}{\sqrt{2}}$

c) $\sin^{-1} \frac{\sqrt{3}}{2}$

Question 2. If $x = \sin^{-1}(3/5)$, find: $\sin, \cos, \tan$ of x. (Draw the triangle with x as one angle.)

Question 3. Draw some triangles and compute:

a) $\cos^{-1} \frac{-1}{2}$

b) $\cos^{-1} \frac{-1}{\sqrt{2}}$

c) $\cos^{-1} \frac{\sqrt{3}}{2}$

Question 4. Find $\sin(\cos^{-1}(x))$ in terms of x. (No trig functions in your answer)

Question 5. Draw some triangles and compute:

a) $\tan^{-1} 1$

b) $\tan^{-1} \sqrt{3}$

Question 6. I am standing 50 feet away from a building. How tall must the building be so that the top of the building looks 52 degrees above horizontal to me?