Quiz #6 Math 101

Name:	I.D.	

1. Show that $\frac{d}{dx}\sin^{-1} x = \frac{1}{\sqrt{1-x^2}}$

2. A spherical snowball is melting at the rate of $4\pi\ cm^3/\sec$. How fast is the raduis changing when it is $5\ cm$. $V = (4/3)\pi r^3$

3. If $S(x) = 10\pi x^2$ and the allowable maximum relative error in S is to be ± 0.1.
Determine the allowable maximum percentage error in x. Then find general formulas for ΔS and dS.