SECTION 4.5

4.5.1 Find the exact value for $\cot\left[\sin^{-1}\left(-\frac{1}{4}\right)\right]$.

4.5.2 Find the exact value for $\tan\left[\sin^{-1}\left(-\frac{1}{4}\right)\right]$.

4.5.3 Find the exact value for $\tan\left(\sec^{-1}\frac{3}{2}\right)$.

4.5.4 Find the exact value for $\sin^{-1}\left(\cot\frac{\pi}{4}\right)$.

4.5.5 Find the exact value for $\sec\left(\sin^{-1}\frac{3}{4}\right)$.

4.5.6 Find the exact value for $\sin^{-1}\left[\sin\left(\frac{3\pi}{4}\right)\right]$.

4.5.7 Find the exact value for $\cos^{-1}\left[\cos\left(\frac{-\pi}{3}\right)\right]$.

4.5.8 If $\theta = \tan^{-1}(1/2)$, find:
(a) $\cos\theta$ (b) $\csc\theta$

4.5.9 Find $\sin\theta$ if $\theta = \sec^{-1}\frac{17}{8}$.

4.5.10 Find the exact value for $\cos\left[\sin^{-1}\left(-\frac{3}{4}\right)\right]$.

4.5.11 Find the exact value for $\sin 2\left(\tan^{-1}1/3\right)$.

4.5.12 Simplify $\sin\left(\sec^{-1}x\right)$.

4.5.13 Find the exact value for $\sin\left[\tan^{-1}(-2/3)\right]$.

4.5.14 Find the exact value for $\cos\left[\sin^{-1}(-3/4)\right]$.

4.5.15 Evaluate $\tan^{-1}\left[\cot\left(\frac{\pi}{6}\right)\right]$.

4.5.16 Simplify $\tan\left(\cos^{-1}2x\right)$.

4.5.17 Evaluate $\sin\left(\cos^{-1}\frac{2}{5}+\sin^{-1}\frac{2}{5}\right)$.

4.5.18 Evaluate $\sin^{-1}\left(\cos\frac{3\pi}{4}\right)$.

4.5.19 Find $f'(x)$ if $f(x) = x\tan^{-1}3x$.

4.5.20 Find $f'(x)$ if $f(x) = x\sin^{-1}2x$.

4.5.21 Find $f'(x)$ if $f(x) = \sec(\tan^{-1}x)$.

4.5.22 Find $\frac{dy}{dx}$ if $y = \cos^{-1}(\cos x)$.

4.5.23 Find $f'(x)$ if $f(x) = e^{2x}\tan^{-1}3x$.

4.5.24 Find $f'(x)$ if $f(x) = \tan^{-1}\left(\frac{x-1}{x+1}\right)$.

4.5.25 Find $f'(x)$ if $f(x) = \sin^{-1}x + \sqrt{1-x^2}$.

4.5.26 Find $\dfrac{dy}{dx}$ if $y = \sin^{-1} \dfrac{1}{\sqrt{1+x^2}}$.

4.5.27 Find $f'(x)$ if $f(x) = \ln(x^2+4) - x\tan^{-1}\dfrac{x}{2}$.

4.5.28 Find the equation of the tangent line to the graph $y = \sin^{-1} x$ at the point $(0,0)$.