Some of the review problems are solved in the homework solutions. The rest are solved here.

21.2

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	y	y'	y''
a)	$5\cos x$	$-5\sin x$	$-5\cos x$
b)	$-3\sin(2x)$	$-6\cos(2x)$	$12\sin(2x)$
c)	$\frac{1}{2}\tan x$	$\frac{1}{2}\sec^2 x$	$\sec^2 x \tan x$
d)	$2\sin x\cos x$ OR $\sin 2x$	$2(\cos^2 x - \sin^2 x)$ $2\cos 2x$	$-8\sin x\cos x$ $-4\sin 2x$

4 a) $\frac{d}{dx}(\cos x)^2 = 2\cos x(-\sin x) = -2\cos x\sin x$

b) $\frac{d}{dx}\cos(x^2) = -\sin(x^2)(2x) = -2x\sin(2x)$

c) $\tan^2 x + 2x\tan x\sec^2 x$

d) $12x^3\sin^2(x^4)\cos(x^4)$

e) $7(\cos(5x)+3)^x\left[\ln(\cos(5x)+3) - \frac{5x\sin(5x)}{\cos(5x)+3}\right]$

7 a) $u'(x)\cos x - u(x)\sin x$

b) $\sec^2(u(x))u'(x)$

c) $u'(x)\tan x + u(x)\sec^2 x$

9 $-2\cos(\sin x)\sin(\sin x)\cos x$

15 a) $y' = \frac{\sin x - x\cos x}{\sin^2 x}$

b) $y' = 18x\tan^2(x^2)\sec^2(x^2)$

c) $y' = \sec^2\left(\frac{x}{3}\right)\left(\frac{1}{3}\right)\sec(3x) + \tan\left(\frac{x}{3}\right)\sec(3x)\tan(3x)\cdot 3$