$ \frac{y(x)}{y'(x)} = \frac{1}{1+4x^{3}} \cdot 6x^{2} $ $ = \frac{6x^{2}}{1+4x^{6}} $ 4) $f(y) = y \cdot ar(c \sin y) + (y'(arc \sin y) $ $ = (y)(\frac{1}{1-y^{2}}) + (1)(arc \sin y) $ $ = \frac{y}{1-y^{2}} + arc \sin y $ 6) $h(x) = -2 e^{\frac{1}{2}arc \tan x}$ $ h'(x) = (-2)(e^{\frac{1}{2}arc \tan x}) + (-2)'(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}) $ $ = (-2)(e^{\frac{1}{2}arc \tan x}) + (0)(e^{\frac{1}{2}arc \tan x}$	2) 0/0	Derivatives Ex	ercise t	9
$ \frac{9(0)}{1+4x^{3}} \cdot 6x^{2} $ $ = \frac{1}{1+4x^{6}} \cdot 6x^{2} $ $ = \frac{6x^{2}}{1+4x^{6}} $ $ \frac{1}{1+4x^{6}} \cdot \frac{1}{1+4x^{6}} $ $\frac{1}{1+4x^{6}} \cdot \frac$	90	)= arccot 2x3		
$\frac{1}{1+4x^3} \cdot 6x^2$ $\frac{1}{1+4x^6}$ $4) f(y) = y \cdot \text{arcsiny} + (y'(\text{arcsiny}))$ $\frac{1}{1+y^2} + (y'(\text{arcsiny}))$ $\frac{1}{1-y^2} + (y'(\text{arcsiny}))$ $\frac{1}{1+y^2} + (y'(\text{arcsiny}))$ $\frac{1}{1+y^2} + (y'(\text{arcsiny}))$ $\frac{1}{1+x^2}$ $\frac{1}{1+x^2}$ $\frac{1}{1+x^2}$ $\frac{1}{1+x^2}$ $\frac{1}{1+x^2} + (x(\cos 3x))^{\frac{1}{2}} - (x(\cos 3x))^{\frac{1}{2}}$ $\frac{1}{1+x^2} + (x(\cos 3x))^{\frac{1}{2}} - (x(\cos 3x))^{\frac{1}{2}}$ $\frac{1}{1+x^2} + (x(\cos 3x))^{\frac{1}{2}} - (x(\cos$	90	$(x) = -\frac{1}{1+(2x^3)^2} \cdot 6x^2$		
4) $f(y) = y \cdot ar(siny)$ f'(y) = (y)(arcsiny)' + (y)'(arcsiny) $= (y)(\frac{1}{\sqrt{1-y^2}}) + (1)(arcsiny)$ $= \frac{y}{1-y^2} + arcsiny$ $h'(x) = -2e^{\frac{1}{2}arctanx}$ $h'(x) = (-2)(e^{\frac{1}{2}arctanx})' + (-2)'(e^{\frac{1}{2}arctanx})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (0)(e^{\frac{1}{2}arctanx})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (\frac{1}{2+xy^2})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (\frac{1}{2}arctanx)'$ $= (-2)(e^{\frac{1}{2}arctan$		1+423 620		
4) $f(y) = y \cdot ar(siny)$ f'(y) = (y)(arcsiny)' + (y)'(arcsiny) $= (y)(\frac{1}{\sqrt{1-y^2}}) + (1)(arcsiny)$ $= \frac{y}{1-y^2} + arcsiny$ $h'(x) = -2e^{\frac{1}{2}arctanx}$ $h'(x) = (-2)(e^{\frac{1}{2}arctanx})' + (-2)'(e^{\frac{1}{2}arctanx})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (0)(e^{\frac{1}{2}arctanx})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (\frac{1}{2+xy^2})'$ $= (-2)(e^{\frac{1}{2}arctanx})' + (\frac{1}{2}arctanx)'$ $= (-2)(e^{\frac{1}{2}arctan$		$-6x^2$		
$f'(y) = (y)(a(c\sin y)' + (y)'(a(c\sin y))$ $= (y)(\frac{1}{\sqrt{1-y^2}}) + (1)(a(c\sin y))$ $= \frac{y}{\sqrt{1-y^2}} + a(c\sin y)$ $h'(x) = -2e^{\frac{1}{2}a(c\tan x)} + (-2)'(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (0)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (0)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (1)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e$		1+4x°		
$f'(y) = (y)(a(c\sin y)' + (y)'(a(c\sin y))$ $= (y)(\frac{1}{\sqrt{1-y^2}}) + (1)(a(c\sin y))$ $= \frac{y}{\sqrt{1-y^2}} + a(c\sin y)$ $h'(x) = -2e^{\frac{1}{2}a(c\tan x)} + (-2)'(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (0)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (0)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e^{\frac{1}{2}a(c\tan x)}) + (1)(e^{\frac{1}{2}a(c\tan x)})$ $= (-2)(e$	4) f(y	) = y.arcsiny	See See Har-AK	
$6) h(x) = -2 e^{\frac{1}{2} \operatorname{arctan} x}$ $h'(x) = (-2)(e^{\frac{1}{2} \operatorname{arctan} x})' + (-2)'(e^{\frac{1}{2} \operatorname{arctan} x})'$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2} \operatorname{arctan} x)' + (0)(e^{\frac{1}{2} \operatorname{arctan} x})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2 + 2 e^{2}})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x)(\frac{1}{2 + 2 e^{2}})$	fly	) = (y)(arcsiny) + (w)(arcsiny)	Since And the time	
6) $h(x) = -2 e^{\frac{1}{2} \operatorname{arctan} x}$ $h'(x) = (-2)(e^{\frac{1}{2} \operatorname{arctan} x})' + (-2)'(e^{\frac{1}{2} \operatorname{arctan} x})' + (0)(e^{\frac{1}{2} \operatorname{arctan} x})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2}, \frac{1}{1+x^2})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2+2x^2})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan}$	J	= (y)(1-y2) + (1)(arcsing)		
6) $h(x) = -2 e^{\frac{1}{2} \operatorname{arctan} x}$ $h'(x) = (-2)(e^{\frac{1}{2} \operatorname{arctan} x})' + (-2)'(e^{\frac{1}{2} \operatorname{arctan} x})' + (0)(e^{\frac{1}{2} \operatorname{arctan} x})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2}, \frac{1}{1+x^2})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan} x})(\frac{1}{2+2x^2})$ $= (-2)(e^{\frac{1}{2} \operatorname{arctan}$		- tarcsiny		
$h'(x) = (-2)(e^{\frac{1}{2}a(c \tan x)}) + (-2)'(e^{\frac{1}{2}a(c \tan x)})$ $= (-2)(e^{\frac{1}{2}a(c \tan x)})(\frac{1}{2} - \frac{1}{1+x^2})$ $= (-2)(e^{\frac{1}{2}a(c \tan x)})(\frac{1}{2+72x^2})$ $= (-2)(e^{\frac{1}{2}a(c \tan x)})(\frac{1}{2+72x^2})$ $= e^{\frac{1}{2}a(c \tan x)}$ $= e^{\frac{1}{2}a(c \tan x)}$ $= e^{\frac{1}{2}a(c \cos 3x)}(a(c \cos 3x))$		V	53(A) + " X > P S (B)"	
$= (-2)(e^{\frac{1}{2}a(ctan \mathcal{H})}) + (0)(e^{\frac{1}{2}a(ctan \mathcal{H})})$ $= (-2)(e^{\frac{1}{2}a(ctan \mathcal{H})$	0) h(x	$\frac{1}{1} = -2 e^{2\pi i c \tan 2}$	tan 18	
$\frac{e^{2\pi i \pi i \pi i \pi 2}}{1 + \pi^2}$ $y = (\alpha i c \cos 3\pi)^{\frac{1}{4}}$ $y' = 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (\alpha i c \cos 3\pi)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1 - (3\pi)^2})(3)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1 - (3\pi)^2})(3)$	11 (**	=(-2)(=\frac{1}{2}\arctan\chi) + (0)	(ożachna)	
$\frac{e^{2\pi i \pi i \pi i \pi x}}{1 + \pi^2}$ $3) y = (\alpha i c \cos 3\pi)^{\frac{1}{4}}$ $y' = 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (\alpha i c \cos 3\pi)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1-(3\pi)^2})(3)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1-(3\pi)^2})(3)$		= (-2) (p 2arct9nxx) (2 , 1+xx2)	(34/37/41)	
$\frac{e^{2\pi i \pi i \pi i \pi x}}{1 + \pi^2}$ $3) y = (\alpha i c \cos 3\pi)^{\frac{1}{4}}$ $y' = 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (\alpha i c \cos 3\pi)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1-(3\pi)^2})(3)$ $= 4(\alpha i c \cos 3\pi)^{\frac{1}{3}} (-\sqrt{1-(3\pi)^2})(3)$	2011	= (-2)(e 2010 tant) ( 7+762)		
8) $y = (arccos 3x)^{4}$ $y' = 4(arccos 3x)^{3} (arccos 3x)$ $= 4(arccos 3x)^{3} (-\sqrt{1-(3x)^{2}})(3)$ $= 4(arccos 3x)^{3} (-\sqrt{1-(3x)^{2}})(3)$		A zarctan 2		
8) $y = (arccos 3x)^{4}$ $y' = 4(arccos 3x)^{3} (arccos 3x)$ $= 4(arccos 3x)^{3} (-\sqrt{3})^{3}$ $= 4(arccos 3x)^{3} (-\sqrt{3})^{3}$		1+ 122	WWW. AND	
8) $y = (aic(653\pi)^{\frac{4}{3}})$ $y = 4(aic(653\pi)^{\frac{4}{3}})$ $= 4(aic(653\pi)^{\frac{4}{3}})$ $= 4(aic(653\pi)^{\frac{4}{3}})$ $= 12\sqrt{(1+3\pi)(1-3\pi)} \cdot aic(65(3\pi)^{\frac{4}{3}})$ $= 12\sqrt{(1+3\pi)(1-3\pi)}$			Markey Constant	
	8) y=	(arc 605 3x)	The state of the s	
$= 4(a_{1}c_{1}c_{2}s_{3}x)^{3}(-\frac{1}{\sqrt{1-c_{2}s_{3}x}})(3)$ $= 4(a_{1}c_{2}c_{3}s_{3}x)(-\frac{1}{\sqrt{1-q_{2}x}})$ $= 12\sqrt{(1+3x)(1-3x)} \cdot a_{1}c_{2}c_{3}s_{3}x$ $(1+3x)(1-3x)$	15 =	4 (arccos 3x) (arccos 3x)		
$= 4(\arccos 3\pi)^{3}(-\frac{3}{\sqrt{1-9x^{2}}})$ $= 12\sqrt{(1+3\pi)(1-3\pi)} \cdot \arccos(3\pi)^{3}$ $(1+3\pi)(1-3\pi)$	=	: 4(graco53x)3 (- 1-(3x))(3)	4.3	
$= 12 \int (1+3\pi)(1-3\pi) \cdot \arccos(3\pi)^{3}$ $(1+3\pi)(1-3\pi)$		4(arccos3x) (- 3/1-9x2)	73.5	
(1+3x)(1-3x)	=	12 (1+3x)(1-3x) · arccos (3x)3		
		(1+3x)(1-32)		

Derivortives Exercise 7	
10) y = arccscx arcsecx	
y'=(arcesex)(arcsecx)' +(arccscx)' (arcsecx)	
$= (\alpha_{1} \in S \in X) \left( \frac{1}{ x   x^{2}-1} \right) + \left( \frac{1}{ x   x^{2}-1} \right) (\alpha_{1} \in S \in X)$	
x x-1	
$\frac{-\alpha \cdot CC5C}{ \chi \sqrt{\chi^2-1}} = \frac{\alpha \cdot CSeC}{ \chi \sqrt{\chi^2-1}}$	
$\frac{-\alpha rc c 5 c \% - \alpha r c 5 e c \%}{ \chi  \sqrt{\chi^2 - 1}}$	
1/0   4/0	
$ z  W(z) = arcsec\sqrt{z}$	
$=\frac{1}{ \sqrt{z^2-1} }, \frac{1}{2}z^{-\frac{1}{2}}.$	
Jz \Jz^2 -1 2	
2z√z-1	
9 (	
$A) m(n) = 2n^3 arccs (2n-3)$	
= $(2n^3)(a_1a_3c(2n-3))^2 + (2n^3)^2(a_1a_3c(2n-3))$	
$= (2n^3) \left( \frac{1}{(2n-3)^2 - 1} \right) (2) + (6n^2) \left( arcc5C(2n-3) \right)$	
$= \frac{4n^3}{ 2n-3 (2n-3)^2-1} + 6n^2 \operatorname{arccsc}(2n-3)$	
5	
8	
<b>♦</b>	
8	
*	
9	