

47. $g(x) = \arcsin 3x$

$y = \arcsin 3x$

$\sin y = 3x$

$\cos y \frac{dy}{dx} = 3$

$\frac{dy}{dx} = \frac{3}{\cos y}$

$\frac{dy}{dx} = \frac{3}{\sqrt{1-9x^2}}$

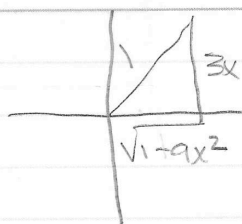
$g(x) = \arcsin 3x$

48.

$g'(x) = x \cdot \frac{3}{\sqrt{1-9x^2}} - \arcsin 3x$

$= \left(\frac{3x}{\sqrt{1-9x^2}} - \arcsin 3x \right) \frac{1}{x^2}$

$= \frac{3}{x\sqrt{1-9x^2}} - \frac{\arcsin 3x}{x^2}$



50. $f(x) = \arcsin x + \arccos x$

$f'(x) = \frac{1}{\sqrt{1-x^2}} - \frac{1}{\sqrt{1-x^2}}$

$= 0$

48. $h(x) = x^2 \arctan x$

$h'(x) = x^2 \cdot \frac{1}{1+x^2} + 2x \arctan x$

$h'(x) = \frac{x^2}{1+x^2} + 2x \arctan x$

49. $h(t) = \sin(\arccos t)$

$h'(t) = \cos(\arccos t) \cdot -\frac{1}{\sqrt{1-t^2}}$

$= -\frac{\cos(\arccos t)}{\sqrt{1-t^2}}$