1.3 $\cos(x-y) = y\sin x$

$(y'-1)\sin(x-y) = y'\sin x + y\cos x$

$[\sin(x-y) - \sin x]y' = y\cos x + \sin(x-y)$

$$y' = \frac{y\cos x + \sin(x-y)}{\sin(x-y) - \sin x}$$

$$\therefore \frac{dy}{dx} = \frac{y\cos x + \sin(x-y)}{\sin(x-y) - \sin x}$$