

Trace	Elementary Function	Current Value	Elemendary Function Derivative	$\nabla_x$ Value	$\nabla_y$ Value
$v_1$	$x$	$x$	$\dot{x}$		
$v_2$	$w_{11}v_1$	$w_{11}x$	$w_{11}\dot{v}_1$		
$v_3$	$y$	$y$	$\dot{y}$		
$v_4$	$w_{12}v_3$	$w_{12}y$	$w_{12}\dot{v}_3$		
$v_5$	$v_2 + v_4$	$w_{11}x + w_{12}y$	$\dot{v}_2 + \dot{v}_4$		
$v_6$	$z(v_5)$	$z(w_{11}x + w_{12}y)$	$z'(v_5)\dot{v}_5$		
$v_7$	$w_{\text{out},1}v_6$	$w_{\text{out},1}z(w_{11}x + w_{12}y)$	$w_{\text{out},1}\dot{v}_6$		
$v_8$	$v_1$	$x$	$\dot{v}_1$		
$v_9$	$w_{21}v_8$	$w_{21}x$	$w_{21}\dot{v}_8$		
$v_{10}$	$v_3$	$y$	$\dot{v}_3$		
$v_{11}$	$w_{22}v_{10}$	$w_{22}y$	$w_{22}\dot{v}_{10}$		
$v_{12}$	$v_9 + v_{11}$	$w_{21}x + w_{22}y$	$\dot{v}_9 + \dot{v}_{11}$		
$v_{13}$	$z(v_{12})$	$z(w_{21}x + w_{22}y)$	$z'(v_{12})\dot{v}_{12}$		
$v_{14}$	$w_{\text{out},2}v_{13}$	$w_{\text{out},2}z(w_{21}x + w_{22}y)$	$w_{\text{out},2}\dot{v}_{13}$		
$v_{15}, f$	$v_7 + v_{14}$	$w_{\text{out},1}z(w_{11}x + w_{12}y) + w_{\text{out},2}z(w_{21}x + w_{22}y)$	$\dot{v}_7 + \dot{v}_{14}$		