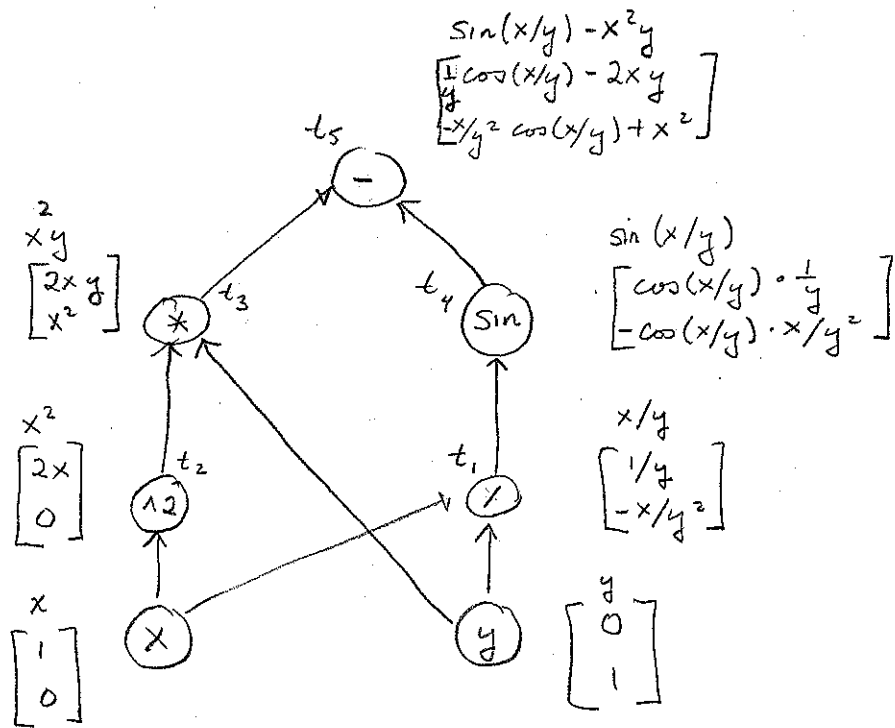


3.



The nodes represent the computations for the function. At each node, we carry the function value and the vector of partial derivatives, working from bottom to top.

4.

	Initially	$t_5 = t_4 - t_3$	$t_4 = \sin t_1$	$t_3 = t_2 * y$	$t_2 = x^2$	$t_1 = x/y$
\bar{x}	= 1				$-2xy$	$+1/y \cos t_1$
\bar{y}	= 1			$+t_2$		$-x/y^2 \cos t_1$
\bar{t}_1	= 0		$+\cos t_1 \cdot 1$			
\bar{t}_2	= 0			$-y$		
\bar{t}_3	= 0	-1				
\bar{t}_4	= 0	$+1$				
\bar{t}_5	= 1					

Answer: $\bar{x} = -2xy + \frac{1}{y} \cos\left(\frac{x}{y}\right)$

$\bar{y} = x^2 - \frac{x}{y^2} \cos\left(\frac{x}{y}\right)$