Calculate formulas for the derivatives of the functions given in the table below.

Function	First Derivative
$f(x) = \sin(x)\cos(x)$	
$f(x) = \sin^2(x) + \cos^2(x)$	
$h(t) = \sin(t^2 + 2^t)$	
$l(z) = \dfrac{\sin(z)}{\cos(z)}$	
$q(s) = e^{\cos(s)}$	
$u(z) = \tan(\cos(z))$	
$v(t) = \cos^2(t) \cdot 4^{\sin(t)}$	
$m(z) = 7\sin(z^2) + \dfrac{1}{\cos(z)}$	

Answers: (a) $f'(x) = \cos^2(x) - \sin^2(x)$. (b) $f'(x) = 0$. (c) $h'(t) = (\cos(t^2 + 2^t))*(2t + \ln(2)*2^t)$.
(d) $l'(z) = 1/\cos^2(z)$. (e) $q'(s) = (-\sin(s))*e^{\cos(s)}$. (f) $u'(z) = -\sin(z)/\cos^2(\cos(z))$.
(g) $v'(t) = -2\cos(t)*\sin(t)*4^{\sin(t)} + \cos^2(t)*\ln(4)*4^{\sin(t)}*\cos(t)$. (h) $m'(z) = 7\cos(z^2)*2z + \sin(z)/\cos^2(z)$.