$$f(x,y) = 1 - xy\cos(\pi y)$$

$$\nabla f = \langle -y\cos(\pi y), -x\cos(\pi y) + \pi xy\sin(\pi y)\rangle$$

$$\begin{aligned}
\nabla f(1,1) &= (-1\cos(\pi), -1(\cos(\pi 1) + \pi 1\sin(\pi 1)) \\
&= 1, \cos(\pi) + \pi\sin(\pi) \\
&= 1, \cos(\pi) + \pi\sin(\pi) \\
&= 1, 1 \\
&= 1, 1
\end{aligned}$$