WolframAlpha computational knowledge engine

saddle points x*y+(1−x)*(1−y^ 2)

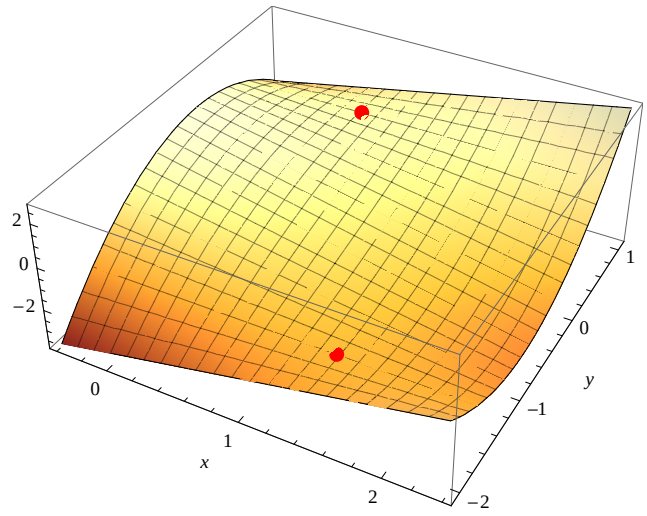
Input interpretation:

saddle points	$x\,y + (1-x)\,(1-y^2)$

Results:

$$x\,y + (1-x)\,(1-y^2) = \frac{1}{2}\left(\sqrt{5}-1\right) \text{ at } (x, y) = \left(\frac{1}{5}\left(5-\sqrt{5}\right), \frac{5-\sqrt{5}}{2\sqrt{5}}\right)$$

3D plot:



Contour plot: