82. Consider the random variables X and Y with joint probability mass function (PMF) given by

Y	X: 0	1	2
-1	0	$\frac{1}{4}$	0
0	$\frac{1}{4}$	0	$\frac{1}{4}$
1	0	$\frac{1}{4}$	0

(a) Calculate the covariance of X and Y.

(b) Are X and Y independent? Prove or disprove.