(a) How many bit strings of length 6 are there? Explain.

(b) How many bit strings of length 6 are there which begin with a 0 and end with a 0? Explain.

(c) How many bit strings of length 6 start with a 0 bit or end with a 0 bit? Explain.

(d) How many bit strings of length 6 are there which contain exactly 3 ones? Explain.

(e) How many bit strings of length 6 are there which contain at most 3 ones? Explain.