# PROBLEM:

In the strobe demo, Remember that we observed that different flashing rates cause the spot on the disk to appear to stand still or to rotate slowly in either the clockwise or counter-clockwise direction.

(a) Assume that the disk actually is rotating in the counter-clockwise direction at a constant speed of 30 rps (revolutions per sec). Give a mathematical representation of the motion of the spot in terms of a rotating complex phasor.

(b) Plot the spectrum of the signal determined in part (b).

f (in Hz)

0
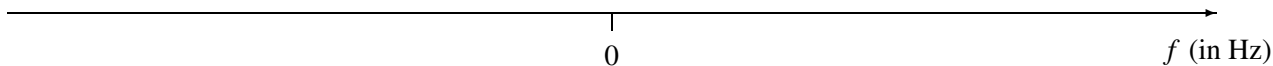
(c) What is the *largest* flashing rate f_s (in flashes/second) such that a single spot appears to be stationary.

(d) If the flashing rate is 32 flashes/second, explain how the spot will appear to move and write a complex phasor that gives the position of the spot at each flash.