## PROBLEM:

In the strobe demo, 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 40 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 (a).
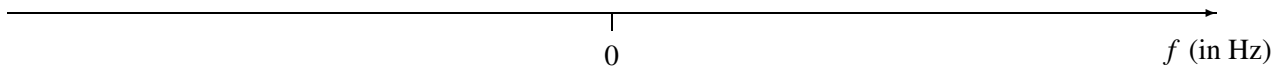
(c) What is the *largest* flashing rate f_s such that the wheel appears to stand still?

(d) What should the flashing rate be in order that the wheel appear to move in the counter-clockwise direction at a speed of 1 revolution per second?