

## PROBLEM:

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

- Assume that the disk actually is rotating in the clockwise direction at a constant speed of 20 rps (revolutions per sec). Give a mathematical representation of the motion of the spot in terms of a rotating complex phasor.
- Give *all* flashing rates  $f_s$  (in flashes/second) such that a single spot appears to be stationary.
- For what flashing rate  $f_s$  will it appear that there are four stationary spots? Sketch the appearance of the disk for this case.