PROBLEM:

In the rotating disk and strobe demo shown in class we observed that different flashing rates of the strobe light would make the spot on the disk stand still or move in different directions. For the following, assume that the disk is rotating clockwise at a constant speed of 660 rpm (that's per minute).

(a) If the flashing rate is 160 times per minute, express the position of the spot on the disk as a complex phasor $p[n]$ versus the flash number n.

(b) Determine the speed (in rotations per minute) and direction of movement of the spot.

(c) Determine the flashing rate so that the spot will move counter-clockwise at a rate of 10 rotations per minute. Give all possible flashing rates such that this will happen.