RAW DATA --> TIMING SOLUTION:

1. Record the name of your pulsar, the discovery period, position, and DM. Figure out how many observations there were over what total time-span, and how many observations per day (min, max, mean). [Nov 8, 2017]

2. Prepfold data (one day's worth) using discovery period in seconds and DM. [Nov 13, 2017]
    a. If that looks bad, use:
    rfifind -o [outputfilename] -psrfits [guppi_..._0001.fits] –rfixwin
    Then use that:
    prepfold -p [period] -dm [dm] -mask [._rfifind.mask] [guppi_..._0001.fits]

3. Take improved parameters from prepfold to create par file using vim/nano. [Nov 13, 2017]

4. Fold all data with par file
    fold_psrfits -P [par file] -t 10 [guppi*.fits]
    Using -t flag specifies the length (in seconds) of individual subintegrations. [Nov 15, 2017]

5. For sanity, use pam to scrunch over frequency:
    pam -e fscr --setnchn 256 [GUPPI*.fits]
    The -e flag defines the resulting file extension and --setnchn scrunches the initial number of frequency channels (4096) to 256. For more information on pam see http://psrchive.sourceforge.net/manuals/pam/. [Nov 20, 2017]

6. Zap RFI using pazi:
    pazi [GUPPI*.fits]
    http://psrchive.sourceforge.net/manuals/pazi/). [Nov 20, 2017]

7. Make a standard profile using paas on one of the zapped GUPPI*.pazi files -- preferably a high signal-to-noise ratio detection. For more information, try paas -h. Running paas will result in several files being written in the working directory, including a *.std standard profile that can be used to generate TOAs. [Nov 27, 2017]

8. Scrunch again to the desired number of subints/subbands using:
    pam -e ftscr --setnchn X --setnsub Y GUPPI*.pazi
    where X and Y represent the number of desired TOAs in frequency/time respectively for each epoch. [Nov 27, 2017]

9. Generate TOAs using pat (http://psrchive.sourceforge.net/manuals/pat/) and the standard profile with the scrunched and zapped files. For example:
   pat -s [.std file] [*.ftscr]
   [Nov 29, 2017]

10. Run tempo2 to time the pulsar using the TOAs and the par file:
    tempo2 -gr plk -f [TOA file] [.par file]
    More info at http://www.atnf.csiro.au/research/pulsar/tempo2/. [Dec 13, 2017]

11. Produce a write-up describing your procedure and results. This should include a P-Pdot diagram showing all of the sources in the ATNF pulsar database with your new pulsar highlighted. [Dec 15, 2017]