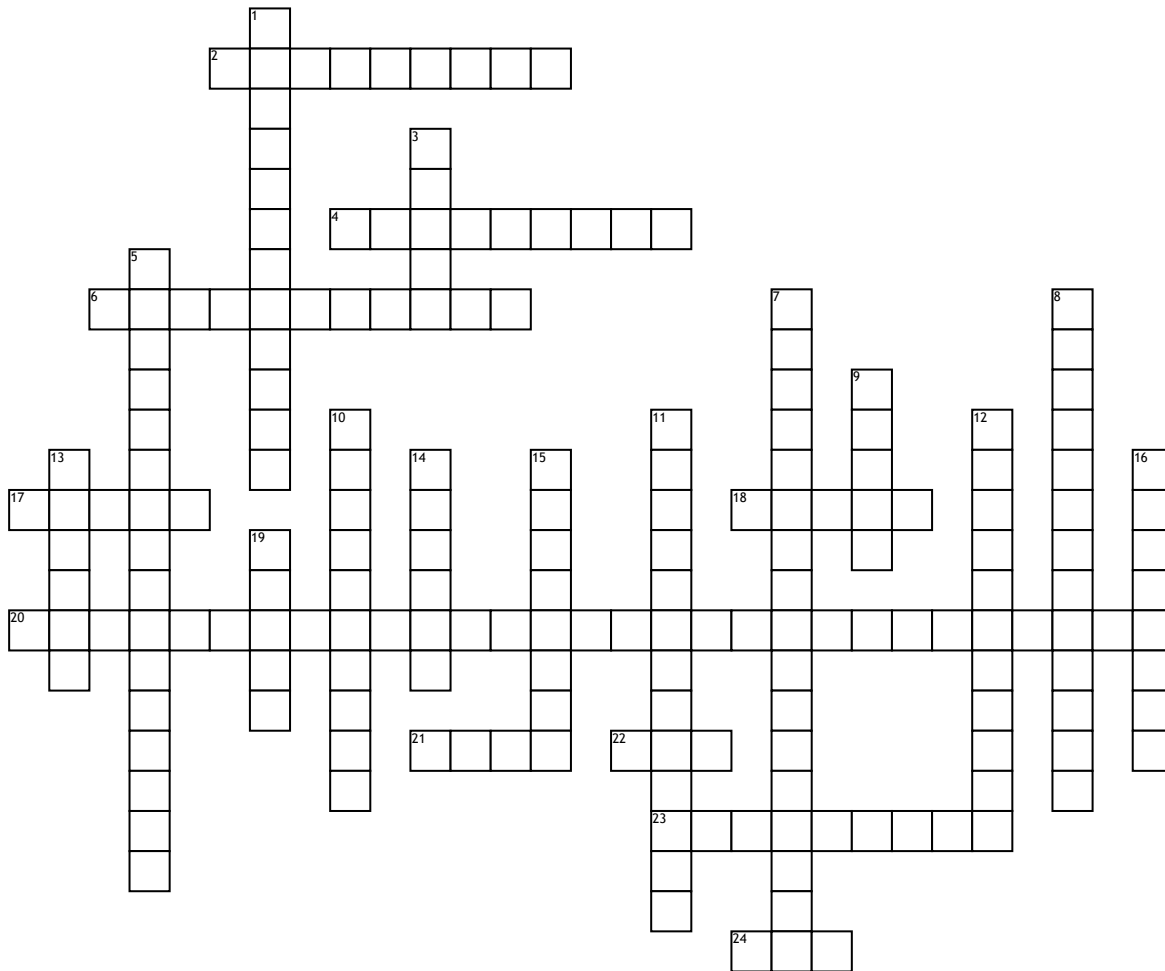MRI PHYSICS CHAPTER 4 PARAMETERS AND TRADE-OFFS

Across
2. pixel x pixel x slice thickness =
4. FOV divided by Matrix =
6. specific FOV that is useful for imaging areas which do not fill the typical square FOV
17. two-dimensional representation of a voxel
18. True or False- when positioning the coil it should always be placed parallel to the magnetic field to receive the best signal
20. technique used to suppress background tissue and increase CNR
21. True of False- square pixels have better spatial resolution than rectangular pixels
22. difference in SNR between two adjacent areas

23. for ideal volume resolution, each voxel must be symmetrical or _____
24. amplitude of signal vs. amplitude of noise

Down
1. matrix with low frequency encodings and low phase encodings
3. three-dimensional volume element depicting the volume of tissue within the patient
5. range of frequencies sampled during the readout gradient
7. ability to distinguish between two points as separate and distinct
8. best type of imaging for joints and small lesions
9. True or False- in respect to Signal to Noise Ratio, you should always use the largest coil possible to receive as much signal as possible

10. matrix with high frequency encodings and high phase encodings
11. number of protons in a specific area that determines the amplitude of the signal received
12. when acquiring volume slices for depicting small lesions in one plane only, voxels may be _____
13. voltage induced in receiver coil by precession of the NMV
14. determines number of pixels in FOV
15. TR x # of Phase Encodes x # of Averages
16. time needed to complete data acquisition
19. frequencies that exist randomly in space and time