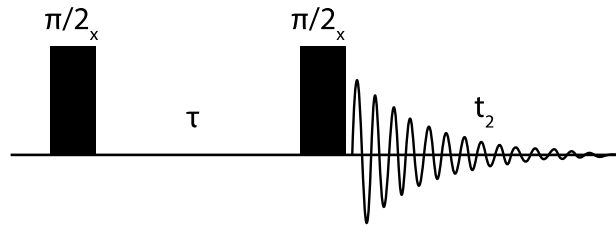


## Jigsaw 3A

1. \* [Keeler Sections 4.7-10] A pulse sequence is shown below.



- a. Use vector diagrams to predict the outcome of the sequence when applied to equilibrium magnetization. In your answer, set up a table describing the values of x-, y- and z- magnetizations after each element of the pulse sequence.
- b. For a fixed delay, sketch a graph of the x- and y-magnetization as a function of the offset during  $t_2$ .
- c. At what values of  $\Omega\tau$  do any nulls occur?
2. [Keeler Section 4.9] What happens to net magnetization after a  $90^\circ$  pulse? How can we measure  $T_2$ ? Draw the pulse sequence and the resulting vector model for two spins. *See also: Jigsaw 3D.2*