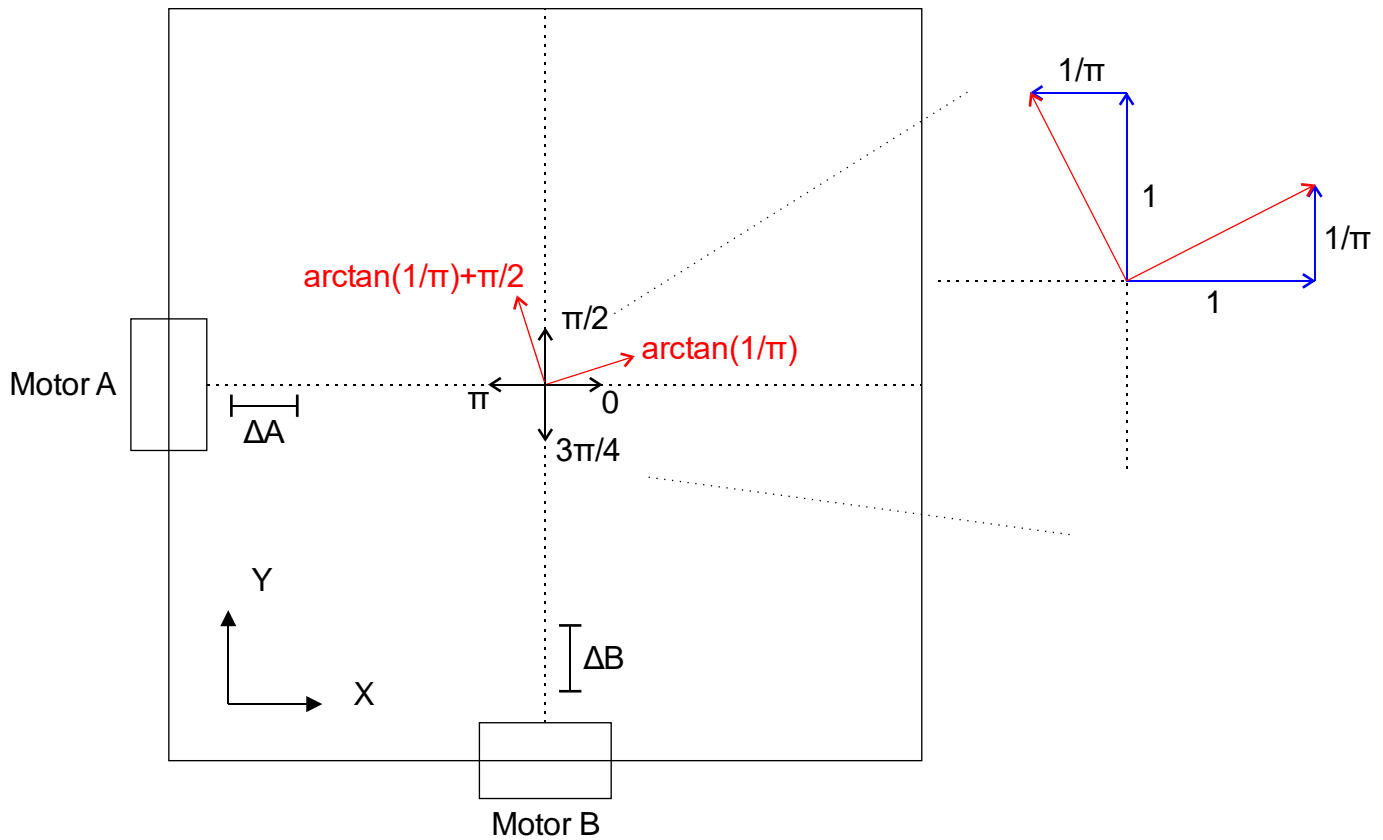


# Spline Drive Kinematics for GRBL



$$\Delta X = \Delta A - \frac{1}{\pi} \Delta B$$

$$\Delta Y = \frac{1}{\pi} \Delta A + \Delta B$$

$$\Delta A = \frac{\pi^2}{\pi^2 + 1} \Delta X + \frac{\pi^2}{\pi^2 + 1} \frac{1}{\pi} \Delta Y$$

$$\Delta B = -\frac{\pi^2}{\pi^2 + 1} \frac{1}{\pi} \Delta X + \frac{\pi^2}{\pi^2 + 1} \Delta Y$$

Constants used in code:

$$\frac{1}{\pi} \approx 0.318309$$

$$\frac{\pi^2}{\pi^2 + 1} \approx 0.908000$$

$$\frac{\pi^2}{\pi^2 + 1} \frac{1}{\pi} \approx 0.289025$$