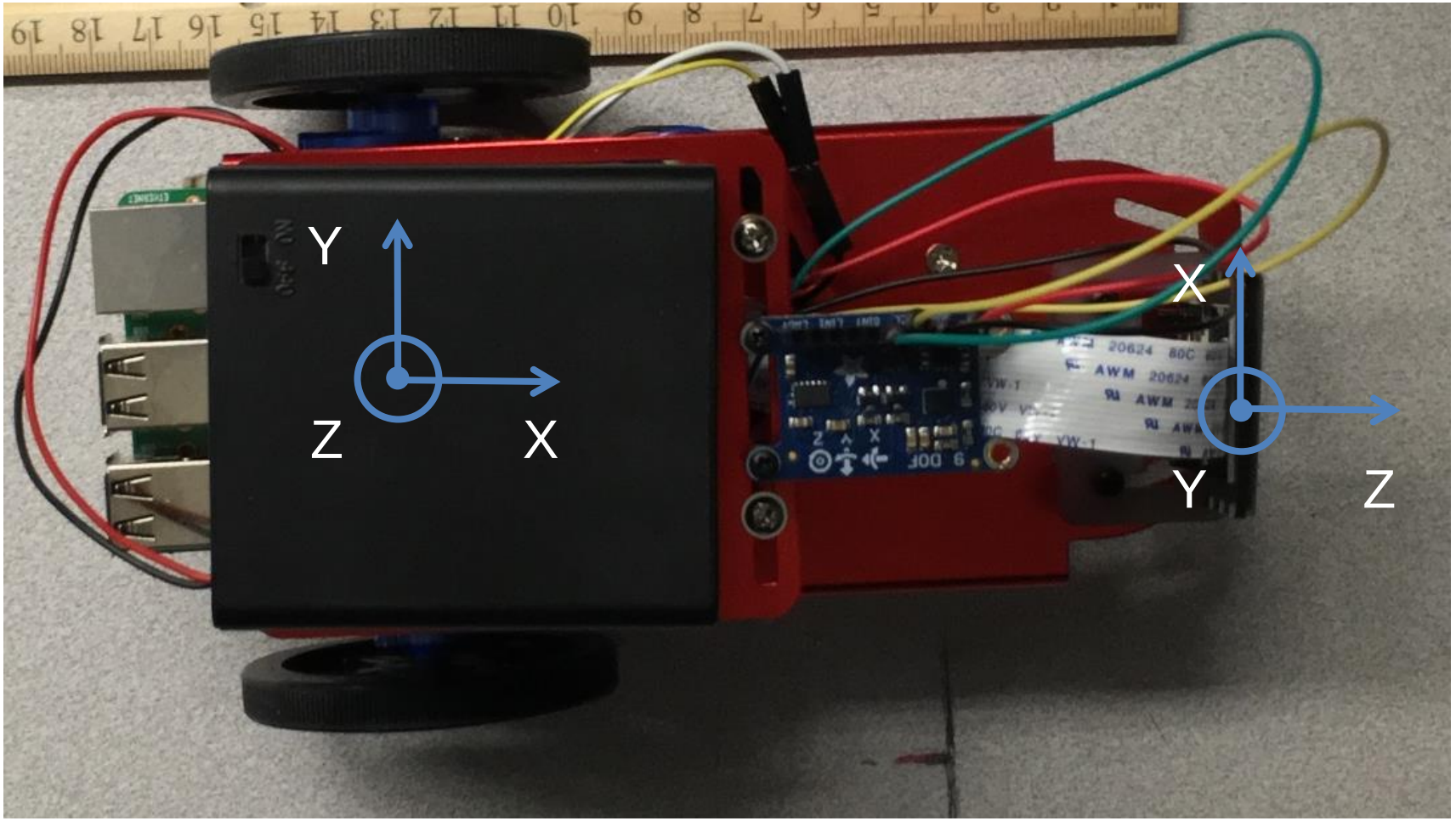
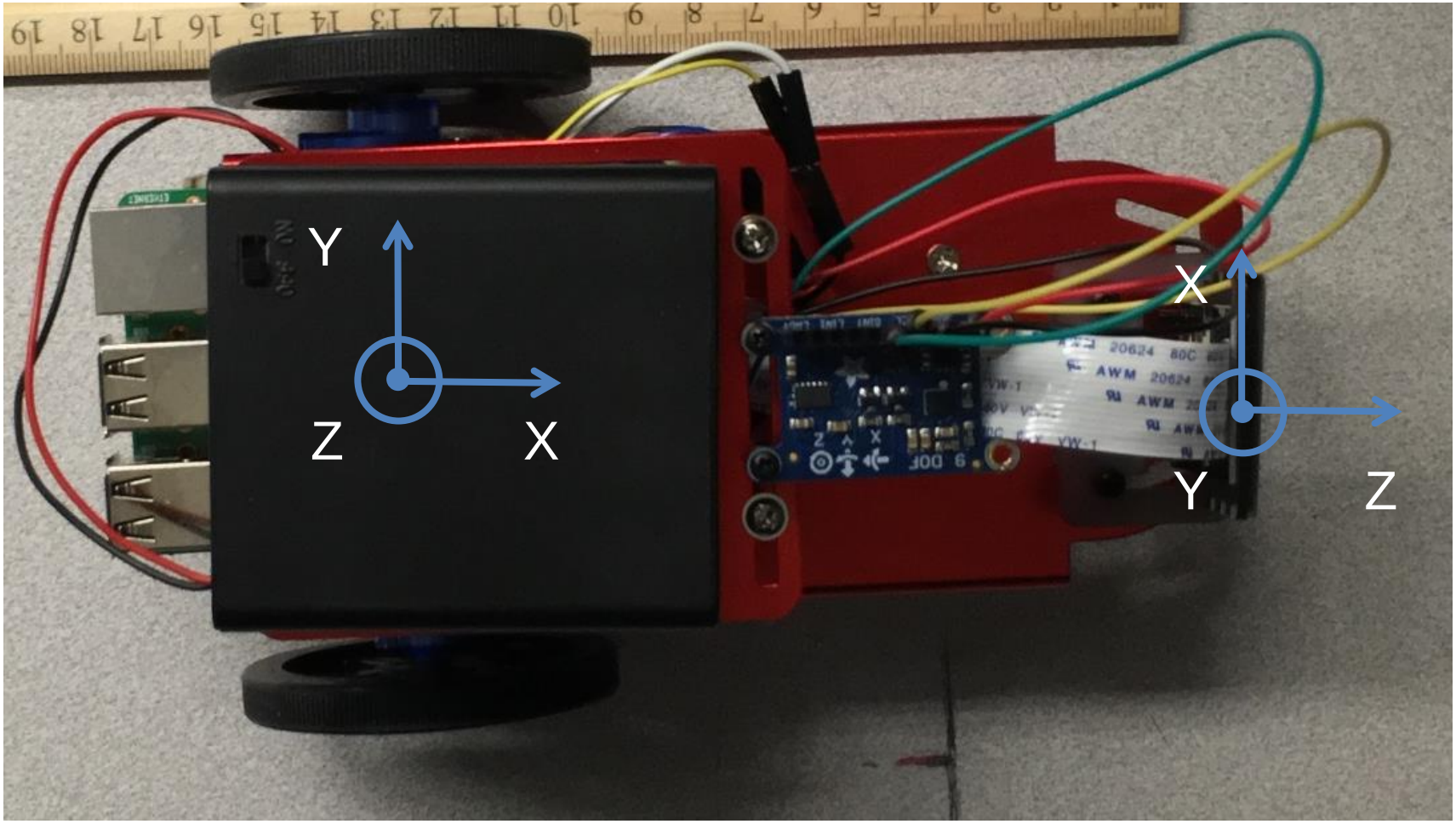
Camera to Body Calibration

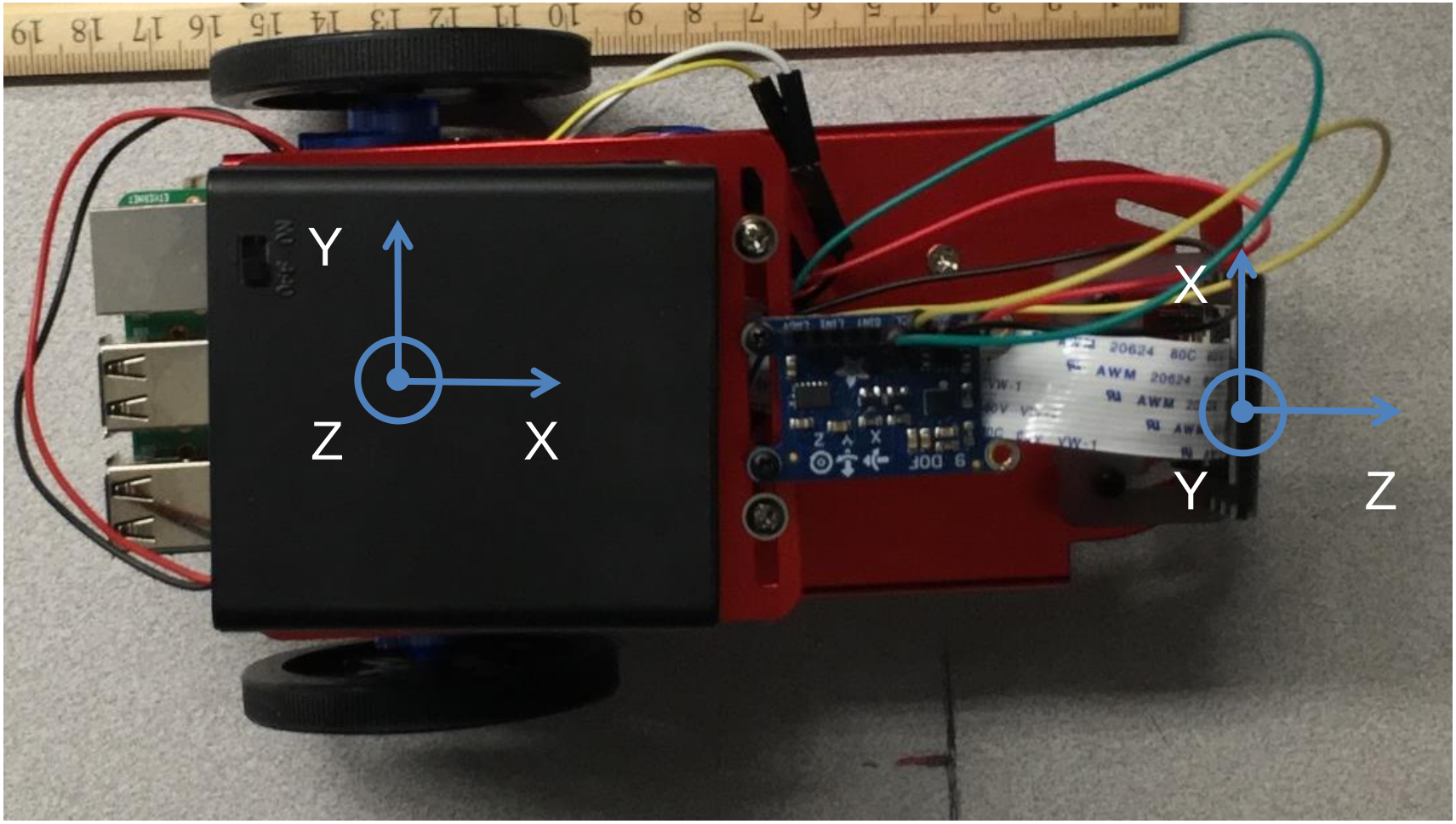
AR Track, Week 3


Y
Z
X
X
Y
Z

$$\begin{pmatrix} X_{BODY} \\ Y_{BODY} \\ Z_{BODY} \end{pmatrix} = {}^{CAM}R_{BODY} \begin{pmatrix} X_{CAM} \\ Y_{CAM} \\ Z_{CAM} \end{pmatrix} + \begin{pmatrix} T_X \\ T_Y \\ T_Z \end{pmatrix}$$



$$\begin{pmatrix} X_{BODY} \\ Y_{BODY} \\ Z_{BODY} \end{pmatrix} = \begin{pmatrix} 0 & 0 & 1 \\ 1 & 0 & 0 \\ ? & ? & ? \end{pmatrix} \begin{pmatrix} X_{CAM} \\ Y_{CAM} \\ Z_{CAM} \end{pmatrix}$$



$$R = \begin{pmatrix} 0 & 0 & 1 \\ 1 & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}$$

$$\det(R) = 1 * -(0 - 1)$$

$$= 1$$