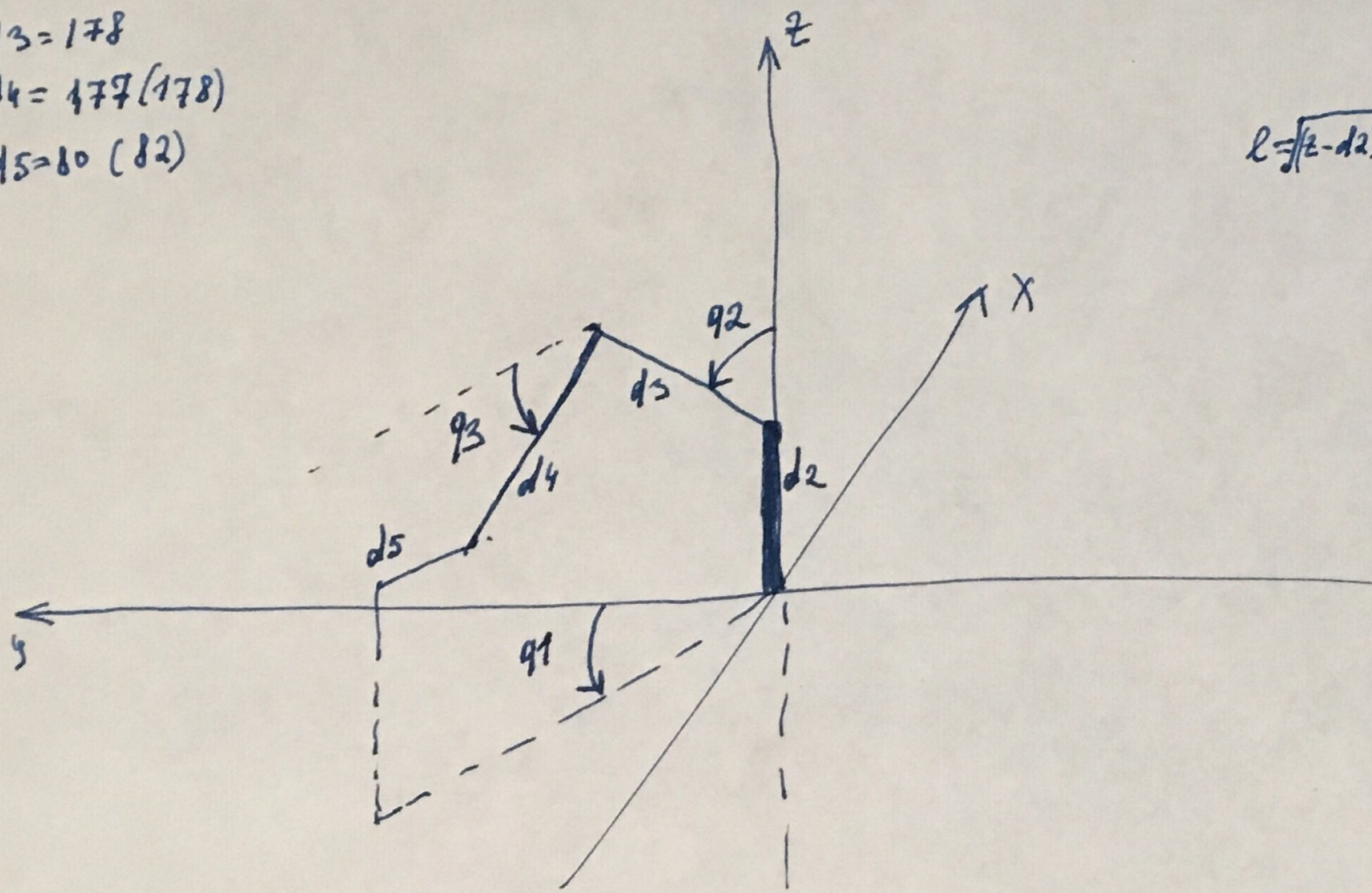


$$d2 = 190$$

$$d3 = 178$$

$$d4 = 177 (178)$$

$$d5 = 80 (82)$$



Rob/c0 01

$$q1 = \text{atan2}(-x, y)$$

$$l = \sqrt{(z-d2)^2 + e^2} \quad e = \sqrt{x^2 + y^2} - d5$$

$$a1 = \text{atan2}(z-d2, el)$$

$$a2 = \arccos\left(\frac{e^2 + d3^2 - d4^2}{2e \cdot d3}\right)$$

$$q2 = \frac{\pi}{2} - a1 - a2$$

$$a3 = \arccos\left(\frac{d4^2 + d3^2 - l^2}{2d4d3}\right)$$

$$q3 = \pi - a3 - \left(\frac{\pi}{2} - q2\right)$$

