These questions relate to lecture material and aim to highlight the most important concepts. We will cover questions similar to these for our final.

Suppose we have a three link kinematic chain. Joint 1 is located at point p1 and rotated 30 degrees around the global Z axis. Joint 2 is positioned relative to join1 at location p2 and rotated 45 degrees in Z. Joint 3 is positioned relative to joint 2 at location p3 and rotated 10 degrees around Z.

1. Draw the kinematic chain described above.

2. What is the global position of joint 3?

3. What is the global position of joint 2?

4. What is the global position of joint 1?

5. What is the position of joint 2 relative to joint 3?

6. Based on your homework, describe how we can efficiently compute the transformation matrices that convert from each joint's coordinate system to the world coordinate system.