Congratulations! You passed!

Grade received 100% **To pass** 80% or higher

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1. When the robot is at an arbitrary configuration θ, does the screw axis corresponding to motion along joint i, represented in {b}, depend on θ_{i-1}? 1 / 1 point

- (•) No.
- ( ) Yes.

Correct
Joint $i-1$ is not between joint i and {b}, so it does not affect the representation of the screw axis in {b}.

2. When the robot arm is at its home (zero) configuration, the axis of joint 3, a revolute joint, passes through the point $(3, 0, 0)$ in the {b} frame. The axis of rotation is aligned with the $\hat{z}_b$-axis of the {b} frame. What is the screw axis $\mathcal{B}_3$? 1 / 1 point

- ( ) $(0, 0, 1, -3, 0, 0)$
- (•) $(0, 0, 1, 0, -3, 0)$
- ( ) $(0, 0, 1, 0, 0, -3)$

Correct
Yes! The angular component is $(0, 0, 1)$, since the rotation axis is aligned with the $\hat{z}_b$-axis. The linear component $(0, -3, 0)$ is calculated by taking a cross product or simply by visualizing the space rotating about the axis and asking what the linear motion is at the origin of the {b} frame.