

✔ Congratulations! You passed!

Grade received 100% To pass 80% or higher

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1. Which of the following statements is true about closed-chain and parallel robots? Select all that apply.

1 / 1 point

- ☒ For a given set of positions of the actuated joints, there may be more than one configuration of the end-effector.

✔ Correct

This is true for closed-chain robots, but not open-chain robots.

- ☐ Closed-chain robots are a subclass of parallel robots.

- ☒ Some joints may be unactuated.

✔ Correct

A closed-chain or parallel robot has more joints than degrees of freedom (by Grubler's formula), and typically there are no more actuators than there are degrees of freedom.

- ☒ The inverse kinematics for a parallel robot are generally easier to compute than its forward kinematics.

✔ Correct

This is often true. The inverse kinematics will typically have a single solution, while the forward kinematics may have multiple solutions.

- ☐ Parallel robots are sometimes chosen instead of open-chain robots for their larger workspace.