Race to Tie 2:

Dear Students,

We just finished Race to Tie and everyone did a great job of getting their bot to tie the pace car. Realizing how easy you made the last lab look, I decided to add some more challenges to the format. In Race to Tie 2, you will have two robots that travel different speeds race to tie each other. Robot 1 must travel three times as fast as Robot 2. Robot 1 must start the race 10 inches up the racetrack while Robot 2 must start the race 40 inches up the racetrack. You may pick whatever speeds you want, just as long as Robot 1 is three times faster than Robot 2. So that everyone in class can understand your excellence, each team must show that their Linkbot car placement will result in a tie. The presentation must include:

- Names for your Linkbot cars.
- A graph showing the motion of both cars.
- The velocity of each car.
- The final equation for each car.
- The length of time needed to complete the race.
- The point at which the Linkbot cars will tie.

Once your explanation is accepted, your team will have two chances to get the Linkbot cars to tie.

Sincerely,
Your Teacher

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