

Team Member Names: _____

Movement Challenge #1

Challenge Description:

Teams will pull from a container a distance that their bot needs to travel (25 cm, 50 cm, 75 cm or 100 cm). The goal is to get as close to the Lego tower without knocking over the Lego person. Each team will have 3 tries to be successful.

Instructions:

1. Start a new NXT program and name it "1 Rotation". Drag a move block to the programming beam.
2. Go to the configuration panel for that block and set the Duration to "1 rotation".
3. Download the program to the NXT and run it.

How many centimeters does your bot travel in one rotation of its wheel? _____cm

Using the above information, calculate how many rotations it takes your robot to travel the following distances.

25cm= _____rotations

50cm= _____rotations

75cm= _____rotations

100cm= _____rotations

Find a teacher and pull a travel distance from the container.

Instructions:

1. Start a new NXT program and use the move block to make your bot travel the distance pulled from the container. ***Please Note:** the configuration panel will accept decimal places!
2. Download the program and test it!

Extra credit:

Beginning at the start position, program the robot to travel the following distances in sequence: 25cm – 50cm – 75cm – 100cm and then backwards to 75cm – 50cm – 25cm – start position.

Share reflections.