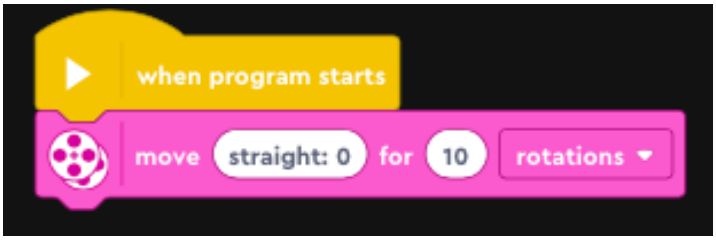
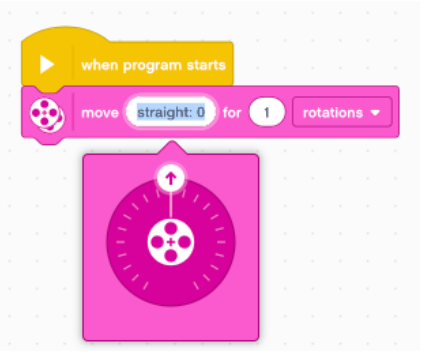
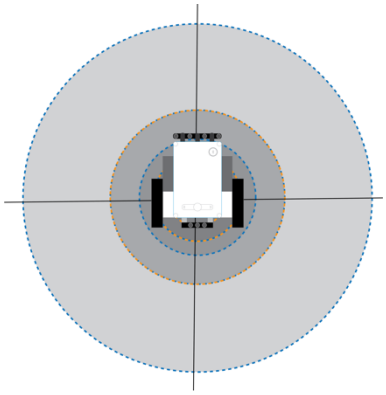
Programming the Move Steering to Turn an Inventor Robot

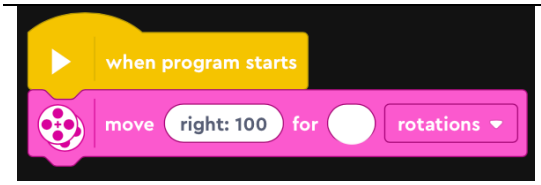
Drag a <move> block onto the programming stage. Click on the move area to input turning.





1. Find a way to program the robot to make one complete spin and end up in the exact same spot. The diameter of the turn should be the same as the distance between the middle of the wheels.





What was the <move> turn setting? _____

What was the <rotations> setting? _____

_____

Which way did the right wheel rotate? _____

How many wheel rotations did the right wheel make? _____

Which way did the left wheel rotate?_____

How many wheel rotations did the left wheel make? _____

Bonus questions: What is the circumference of the circle traveled by the outer wheel of the robot in wheel rotations? Hint use your pipe cleaner. _____

What is the circumference of the circle traveled by the outer wheel of the robot in cm?

_____

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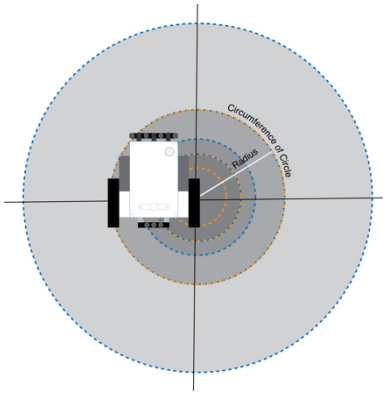
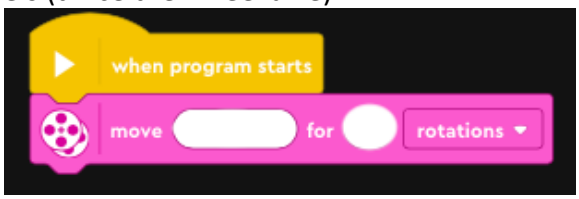
2. Find a way to program the robot to make one complete pivot and end up in the exact same spot. With a pivot, one wheel stays in the same position. Align one wheel center point of the mat where the lines cross. The diameter of the turn should be twice the distance between the middle of the wheels (twice the wheel axle).





What was the <move> turn setting? _____

What was the <rotations> setting? _____

Which way did the right wheel rotate? _____

How many wheel rotations did the right wheel make? _____

Which way did the left wheel rotate?_____

How many wheel rotations did the left wheel make? _____

Bonus questions: What is the circumference of the circle traveled by the outer wheel of the robot in wheel rotations? Hint use your pipe cleaner. _____

What is the circumference of the circle traveled by the outer wheel of the robot in cm?

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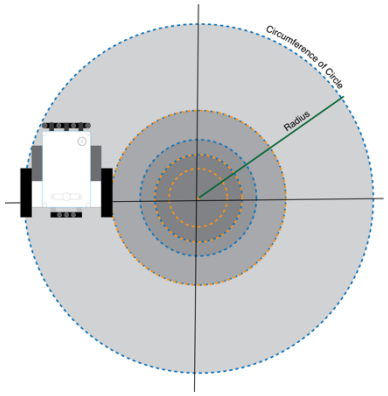
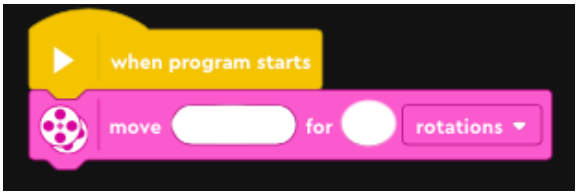
3. Find a way to program the robot to make one large turn and end up in the exact same spot. The diameter of the turn should be four times the distance between the midpoint of the wheels (4 times the wheel axle).





What was the <move> turn setting? _____

What was the <rotations> setting? _____

Which way did the right wheel rotate? _____

How many wheel rotations did the right wheel make? _____

Which way did the left wheel rotate? _____

How many wheel rotations did the left wheel make? _____

Bonus questions: What is the circumference of the circle traveled by the outer wheel of the robot in wheel rotations? Hint use your pipe cleaner. _____

What is the circumference of the circle traveled by the outer wheel of the robot in cm?