

SPIN TURN

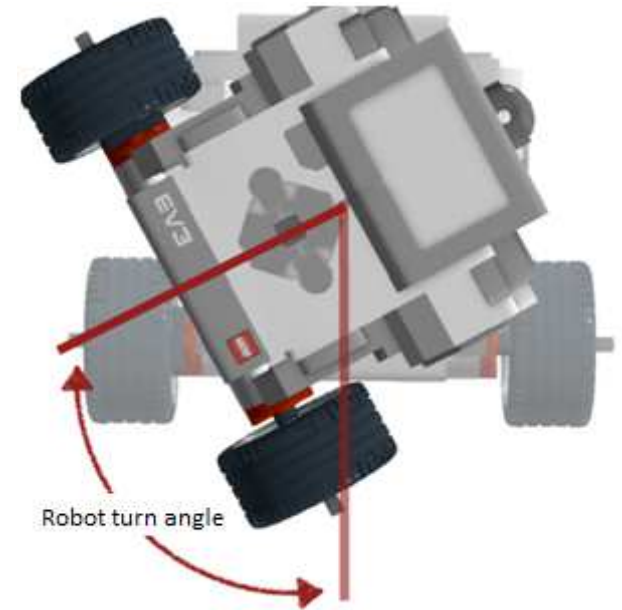
Often, there is a confusion between the degrees of rotation of the engine block and the actual degrees of rotation of the robot, here called spin turn angle. The value that you enter into the software is the one that determines the angle of rotation of the wheel and not that of the robot. To find the good value, you need to do a little math ...

Moreover, depending on the chosen value for the steering parameter, the rotation of the robot varies.

Notice where the robot ends in both pictures after a 180 degree turn.

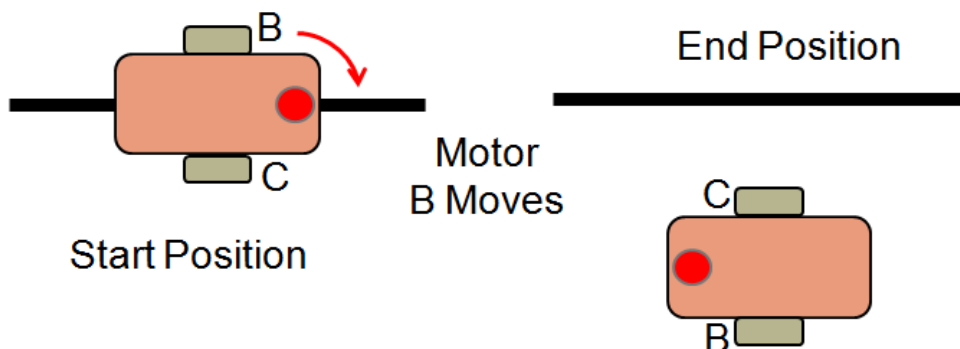
In the Spin Turn, the robot moves a lot less and that makes Spin Turns are great for tight positions. Spin turns tend to be a bit faster but also a little less accurate.

So when you need to make turns, you should decide which turn is best for you!



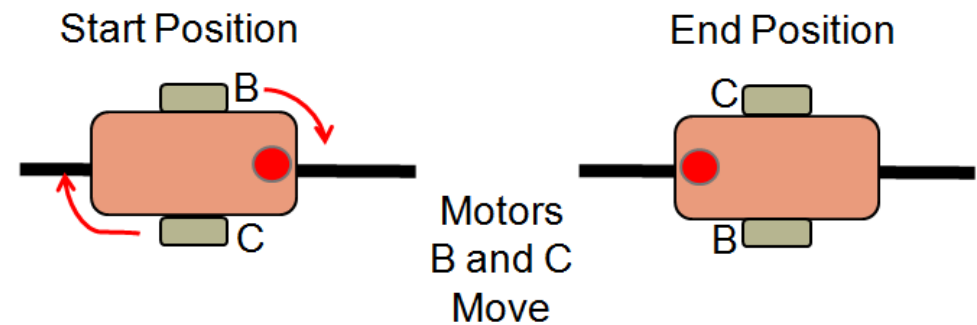
Case n°1

180 Degree Pivot Turn



Case n°2

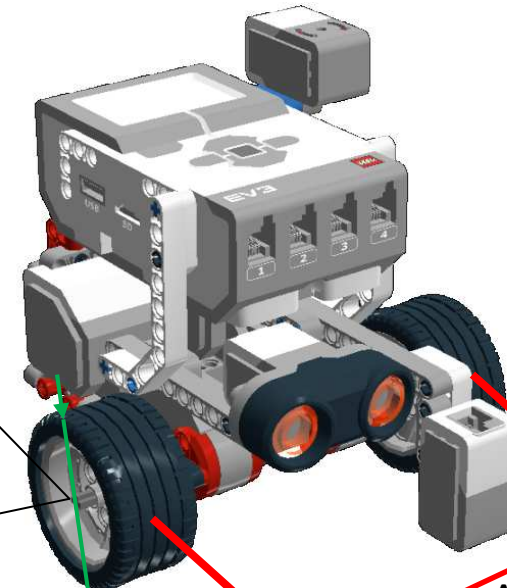
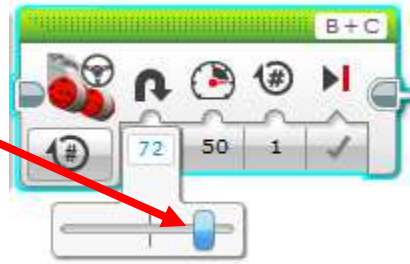
180 Degree Spin Turn



Select the value of the steering by dragging the slider so that the robot will rotate.

"100" : spin turn.

"50" : pivot turn.



θ : angle of rotation of the wheel

Diameter of the wheel 56mm

Axle track (distance between the centerline of two roadwheels)

Remember :

Set value "100":

$$\theta^\circ = \frac{\text{Axle track (mm)} \times \text{desired turn angle(in degrees)}}{\text{Diameter of the wheel (mm)}}$$



Set value "50":

$$\theta^\circ = \frac{2 \times \text{Axle track (mm)} \times \text{desired turn angle(in degrees)}}{\text{Diameter of the wheel (mm)}}$$

