Name_____

U3-1.1d Challenge up: Drive a circle

Using a definite loop, like the repeat block, is helpful when you want to write a program for Edison to drive in a shape because shapes have repeating patterns. You have probably noticed a pattern between the number of sides and angles a shape has compared with the input you need to use in a definite loop in a program that gets Edison to drive that shape. Can this pattern help you drive a circle even though a circle has no sides or angles?

What to do

Write a program for Edison using EdScratch so that your robot can drive in a circle. Your Edison needs to drive in the shape of a circle, not just spin in one spot. Your program needs to use a definite loop control structure, so be sure to include a repeat block. Your program should be as efficient as possible, so try to use as few blocks as you can while still completing the task.

Hint!

What do you notice about how a shape looks the more sides it has? If you are feeling stuck, try looking at shapes with many sides, such as a decagon and an icosagon. Use the pattern you see to help you write your program.

Download your program to your robot and use activity sheet U3-4 to test your program.

1. What does your program look like? Write your program below. Be sure to include all the input parameters you used.

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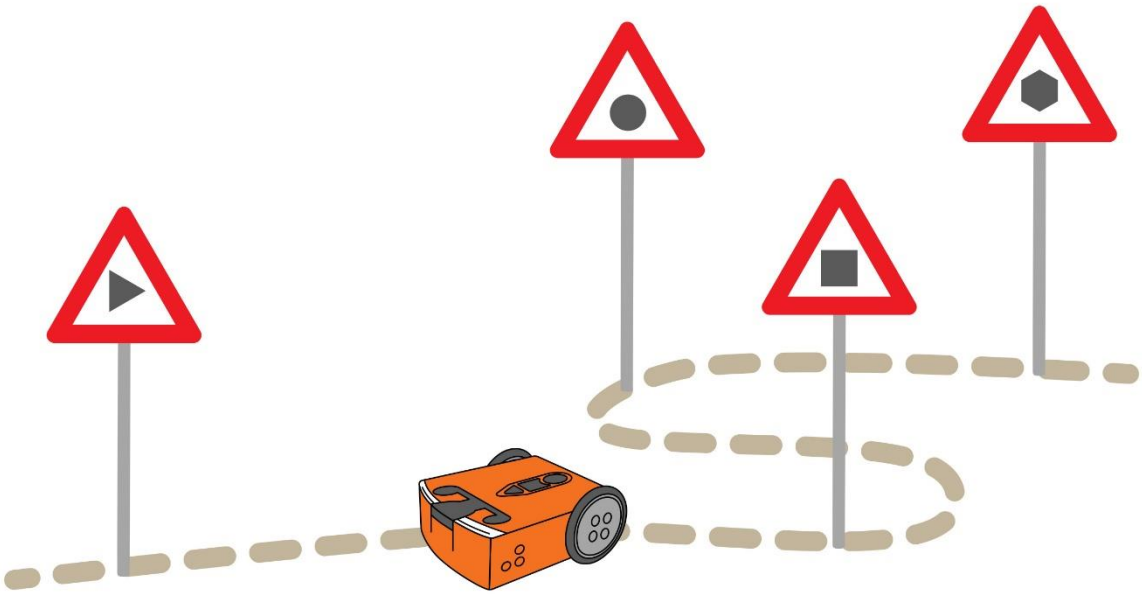
2. Does your robot drive in a perfect circle? If not, can you think of a reason why not?

Sample student answer: No, Edison isn't actually driving in a circle, but in a shape with lots of sides. It looks like a circle, but it's not a real circle.



Activity sheet U3-4: Drive a circle