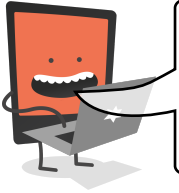




Name: \_\_\_\_\_ Date: \_\_\_\_\_

I can write programs that solve a series of challenges.

LessonID: 469



Program your Crumble car to solve a series of challenges as set out by our Internet shopping client. For each challenge, copy or print out the code you used. To print it, take a screenshot as per the instructions.

## Challenge 1 - Spin Spin

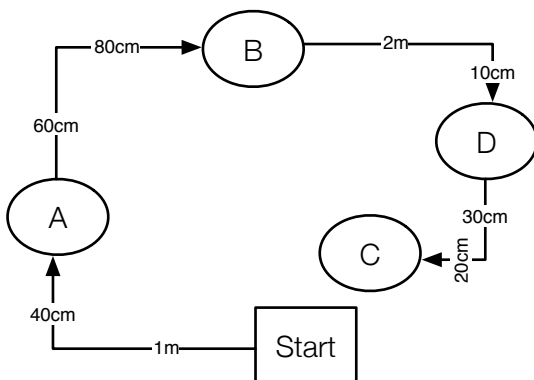
Most of the time your vehicle will turn on the spot so it can move around the warehouse quickly.

Program your car so it can turn left  $90^\circ$ , right  $90^\circ$  and  $180^\circ$  **on the spot** - that means without moving forwards or backwards.

## Challenge 3 - Find and Fetch

Your vehicle needs to be able to drive to different points in the warehouse to collect products for shipping.

Recreate the plan below (or create your own course) then get your car to drive to each point in the **most efficient** way.



## Challenge 2 - Find and Fetch

Sometimes it's better for your vehicle to take a wider turning circle, if for example it's driving round a large obstacle.

Put a PE hoop on the floor and get your car to drive around the inside of the hoop as close to the edge as possible. It mustn't touch the hoop though!

## Challenge 4 - Zig Zag

Your vehicle needs to be able to dodge debris that may be left on the floor.

Create a course like the one below, then get your car to zig zag between the obstacles. Start with 10 points and lose a point for each one you touch. Hint: don't place the obstacles too close together.

