

CAMBRIDGE ASSESSMENT INTERNATIONAL EDUCATION Cambridge ICT Starters

CANDIDATE NAME			
CENTRE NUMBER		CANDIDATE NUMBER	
INITIAL STEPS			4272/B
Stage 2: Starting Prog	ramming	For mode	eration from 2019

Maximum time allowed: 1 hour

Additional Materials:

DrawSquare.sb2 Track.sb2 MyPrograms_4272B.doc

READ THESE INSTRUCTIONS FIRST

Write your Centre number, candidate number and name on all the work you hand in.

For Tutor Use						
Starting Programming						
Candidate was able to:	Pass/ Merit	Please tick				
Plan a short sequence of instructions (an algorithm) to achieve a specified objective.	Р					
Create a program as a sequence of instructions to achieve a specified objective.	Р					
Predict what the sprite will do when given a short program as a sequence of instructions.	Р					
Create a program that moves a sprite at least five times and turns it though angles of other than 90 or 180 degrees, to reach a specific target.	М					
Correct (debug) a short program containing one error.	М					
Tutors also need to complete Learning Objectives Record Sheet fo						

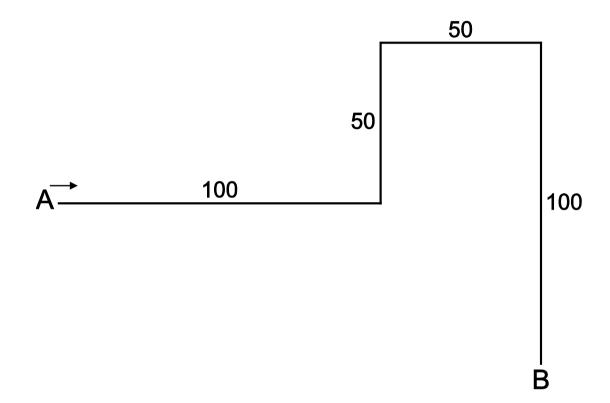
This document has 8 pages. Blank pages are indicated.

Centre	Candidate	Candidate	
number	number	name	

Section A

A sprite follows the path shown on the diagram below, to move from point **A** to point **B**.

The diagram shows the distances in steps.



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Initial Steps – Stage 2 – Starting Programming

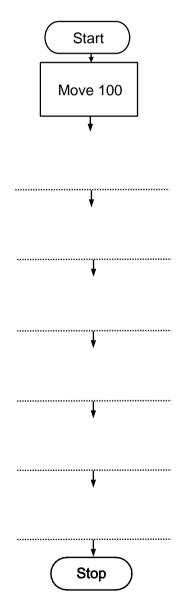
1 A flowchart is used to plan out the sequence of instructions that will move the sprite as shown.

Complete the flowchart using these symbols.

Start Move 50 Move 100 90 degrees 90 degrees Output	Start	Move 50	Move 100	Turn RIGHT 90 degrees	Turn LEFT 90 degrees	Input Output	Stop
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Not all symbols need to be used.

Some symbols can be used more than once.



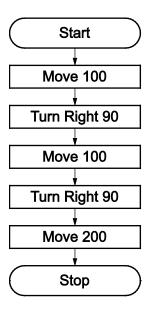
Centre	Candidate	Candidate	
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- 2 Open Scratch.
- 3 Create a program in Scratch which implements the algorithm from question 1. The algorithm should run when the *space key* is pressed.
- 4 When your program is complete, take a screenshot (print screen) showing your code and output. *Paste* your screenshot into **Box 1** of **MyPrograms_4272B.doc**

(LO2)

Centre	Candidate	Candidate	
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5 The algorithm shown below moves a sprite around the screen.



Write a prediction of the actions the sprite will take when following this sequence of instructions.

(LO3)

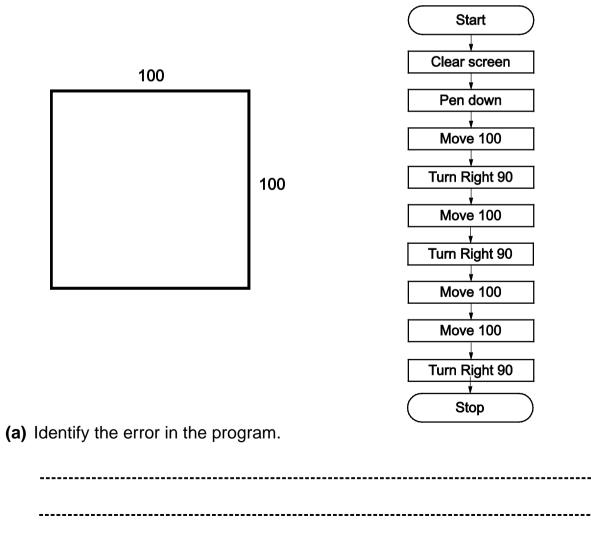
Centre	Candidate	Candidate	
number	number	name	

Section B

- 1 *Open* the program file **Track.sb2** in Scratch.
- 2 Create a program which moves the sprite along the path, from the **START** point to the **END** point.
- 3 When your program is complete, take a screenshot (print screen) showing your code and output. *Paste* your screenshot into **Box 2** of **MyPrograms_4272B.doc**

(LO4)

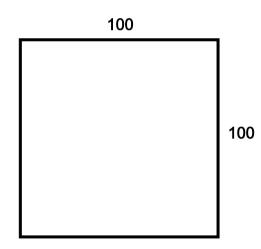
4 The program shown below is intended to draw a square where each side is 100 steps. The program contains **one** error.



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(b) Explain how the program can be corrected so that the square is drawn.

- 5 *Open* the program file **DrawSquare.sb2** in Scratch.
- 6 Correct the program so that it produces the square.



7 When your program is complete, take a screenshot (print screen) showing your code and output. *Paste* your screenshot into **Box 3** of **MyPrograms_4272B.doc**

(LO5)

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