FOUNDATION

2.8 Function Machines: 10-minute Pack

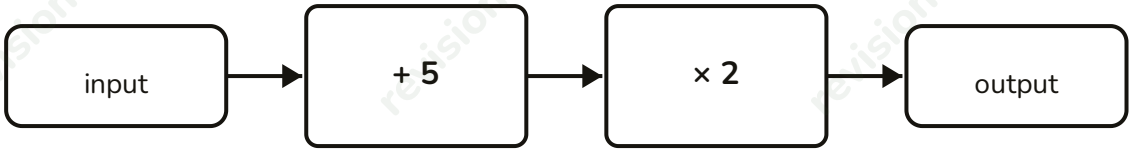
EDEXCEL 1MA1 · Calculator allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 The function machine below has two steps.
input --> [+5] --> [x 2] --> output



(a) Work out the output when the input is 1. **(1)**

.....

(b) Work out the output when the input is 4. **(1)**

.....

(c) Work out the output when the input is -3. **(2)**

.....

(Total for Question 1 is 4 marks)

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2 The function machine below subtracts 6 from every input.
input --> [-6] --> output
Work out the input for each output given.



(a) The output is 10. Find the input. **(1)**

.....

(b) The output is -2. Find the input. **(1)**

.....

(c) The output is 0. Find the input. **(1)**

.....

(Total for Question 2 is 3 marks)

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3 Here is a function machine.
input --> [+ 2] --> output
The output is 5. Work out the input.

(Total for Question 3 is 2 marks)

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Mark scheme · 2.8 Function Machines: 10-minute Pack

A correct answer earns full marks unless the question asks for working, a method, proof or explanation.

Question 1

(a) 12 cao	**B1**
(a) Answer: 12	
(b) 18 cao	**B1**
(b) Answer: 18	
(c) 2 seen (correct value after the first step, -3+5)	**M1**
(c) 4 cao	**A1**
(c) Answer: 4	

Question 2

(a) 16 cao	**B1**
(a) Answer: 16	
(b) 4 cao	**B1**
(b) Answer: 4	
(c) 6 cao	**B1**
(c) Answer: 6	

Question 3

uses inverse operations or works backwards	**M1**
3 cao	**A1**
Answer: 3	

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