6.2 Pre-Algebra and Sequences: 10-minute Pack

National Curriculum (2014) Mathematics - KS2 Algebra (missing numbers, formulae, sequences) · Calculators not allowed · about 10 minutes

Total Marks

Name: _____ Date: ____ / ____ / _____

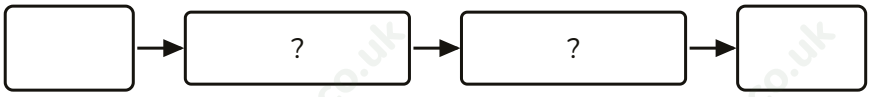
Answer ALL questions. Show all your working.

1 Find the missing number: ___ - 8 = 13

(1)

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2 Rhys programmes a function machine. Input 2 gives output 9. Input 5 gives output 18. Input 8 gives output 27.



(a) Find the two-step rule connecting the input and the output. **(2)**

(b) Use your rule to find the output when the input is 12. **(1)**

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3 Jack is a plumber. He charges a £25 callout fee plus £30 for each hour he works. The total cost, C (in pounds), for h hours is given by the formula C = 25 + 30h.

(a) Find C when h = 5. **(1)**

.....

(b) Chidi paid £145 for a job. Find h, the number of hours Jack worked. **(2)**

.....

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4 Jade has 3 more marbles than Quinn. Together they have 21 marbles.

How many marbles does Quinn have?

Answer: ___

(2)

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Mark scheme · 6.2 Pre-Algebra and Sequences: 10-minute Pack

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

Question 1

21 cao	**B1**

Answer: **21**

Question 2

(a) correctly identifies the first operation, x3 (oe)	**M1**
(a) correctly identifies the full rule, x3 then +3 (oe) cao	**A1**

(a) Answer: **Multiply by 3, then add 3 (input x 3 + 3)**

(b) 39 cao, ft their rule from part (a)	**B1**

(b) Answer: **39**

Question 3

(a) 175 (pounds) cao	**B1**

(a) Answer: **£175**

(b) 145 - 25 (= 120) seen or implied	**M1**
(b) 4 (hours) cao	**A1**

(b) Answer: **4 hours**

Question 4

21 - 3 = 18 seen	**M1**
9 cao	**A1**

Answer: **9**

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