Planner

Functions

- Using 2-step function machines
- Using functions to make sequences

Keywords

You should know

explanation 1a | explanation 1b | online

1 Copy and complete these function machines.

a

8			
12	→ − 3 →	× 2 →	
14			

b

8			
12	→ × 2 →	− 3 →	
14			

2 Copy and complete these function machines.

a

2			
5	→ × 3 →	+ 5 →	
7			

b

2			
5	→ + 5 →	× 3 →	
7			

3 Copy and complete these function machines.

a

5			
11	→ − 4 →	× 3 →	
16			

b

4			
10	→ ÷ 2 →	+ 7 →	
8			

***c**

3			
5	→ × 5 →	− □ →	15
9			

***d**

4			3
9	→ + □ →	÷ 5 →	□
□			8

***4** Arrange the operations × 2, − 5 and + 10 in the function machine to make these outputs.

a 35 **b** 20

10 → □ → □ → □ → □

***5** Arrange the operations × 5, − 4 and + 7 in the function machine to show these outputs.

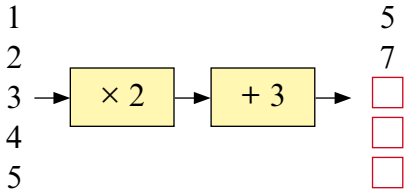
a the largest output

b the smallest output

10 → □ → □ → □ → □

explanation 2

6 **a** Use the function ‘multiply by 2 then add 3’ to complete this sequence table.

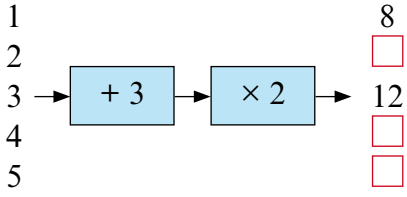


Position	1st	2nd	3rd	4th	5th
Term	5	7			

b What is the 100th term in this sequence?

c Is 53 in this sequence? Explain how you know.

7 **a** Use the function ‘add 3 then multiply by 2’ to complete this sequence table.

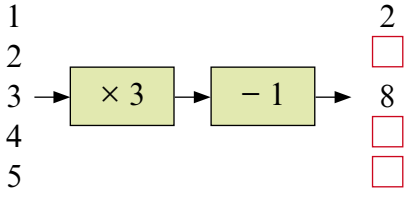


Position	1st	2nd	3rd	4th	5th
Term	8		12		

b What is the 100th term in this sequence?

c Is 53 in this sequence? Explain how you know.

8 **a** Use the function ‘multiply by 3 then subtract 1’ to complete this sequence table.



Position	1st	2nd	3rd	4th	5th
Term	2		8		

b What is the 100th term in this sequence?

c Is 29 in this sequence? Explain how you know.