PA4-18: Describing and Creating Patterns

page 180

sequence, each number is greater than the one before it: 7,8,10,15,21 The sequence is always increasing.

in this sequence, each number is less than the one before it:

25 , 23 , 18 , 11 , 8

The sequence is always decreasing.

 Write a + sign in the circle to show where the sequence increases. Write a - sign to show where it decreases.

	(+)	(-)	+
a)	6 ,	9 ,	7 , 11



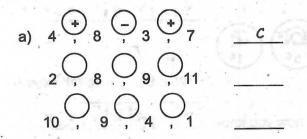


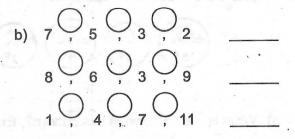
g)
$$2$$
 , 7 , 4 , 9

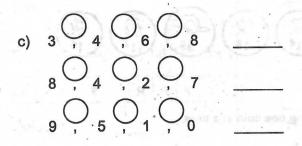
2. Write a + sign in the circle to show where the sequence increases.

Write a - sign to show where it decreases. Then write ...

- ... an A beside the sequence if it increases
- ... a B beside the sequence if it decreases
- ... a C beside the sequence if it increases and decreases.



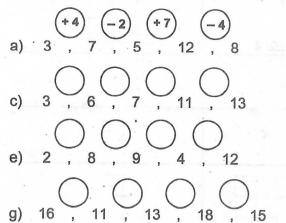




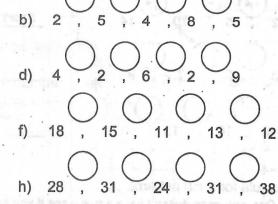
d)	17 , 14 , 12 , 10	
	20 , 24 , 15 , 29	
	20 , 24 , 15 , 29	20M08
	\bigcirc	
E 150	23 - 29 - 34 - 40	

PA4-19: Describing and Creating Patterns (Advanced) page 181

1. Find the amount by which the sequence increases or decreases. (Write a number with a + sign if the sequence increases, and a - sign if it decreases.)



	. ()		$\Big)_{8, 5}$			
b)	2	,	5	,	4	,	8	,	5	
						-	7	_		



2. Match each sequence with the sentence that describes it. This sequence ...

a)	A B	A increases by 3 each time. B increases by different amounts.										
			9	,	12	,	15	,	18	,	21	
			7	,	10	,	13	,	14	,	19	

... increases by 4 each time. ... increases by different amounts.

	6	,	10	,	14.	,	17	,	2
	5	,	9		13		17		21

- c) A ... decreases by 5 each time. B ... decreases by different amounts. 35 , 30 , 25 , 20 , 15 30 , 25 , 20 , 15 , 5
- ... decreases by different amounts. ... decreases by the same amount.

-	 10	,	9	,	8	,	6	; .	5
	11	,	10	,	9	,	8	٠.	7

BONUS

- ... increases by 5 each time.
 - ... decreases by different amounts.
 - C ... increases by different amounts.

-	17 ,	22	,	28	,	32	, 34
MECONANTION	17 .,	14	,	10	1	9 ,	6
	14 ,	19	,	24	,	29	; 34

- ... increases and decreases.
 - ... increases by the same amount.
 - ... decreases by different amounts.
 - ... decreases by the same amount.

 21,	19	. ,	15	,	13	,	9

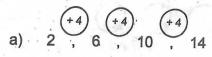
10, 13, 9, 7, 5

19, 17, 15, 13, 11

.9 , 12 , 15 , 18 , 21

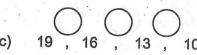
PA4-19: Describing and Creating Patterns (Advanced) (cont'd) page 182

3. Write a rule for each pattern. Use the words add or subtract, and be sure to say what number the pattern starts with.



Start at 2, add 4





Write a rule for each pattern.

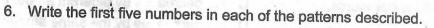
NOTE: One sequence doesn't have a rule - see if you can find it.

- 8 , 11 , 14 , 17
- 14 , 10 , 6 , 2
- 25 , 21 , 18 , 17 , 11
- 61 , 65 , 69 , 73
- 5. Describe each pattern as increasing, decreasing or repeating.
 - a) 1,4,7,10,13,16
 - ____ b) 1,5,8,1.5.8

c) 9,8,7,6,5,4

d) 2,4,6,8,10,12

- e) 3,8,3,8,3,8
- _____f) 21,16,10,7,5,1 _



- a) Start at 6, add 3
- b) Start at 26, subtract 4 c) Start at 39, add 5
- 7. Create an increasing or a decreasing number pattern. Give the rule for your pattern.
- 8. Create a repeating pattern using... a) letters
- b) shapes c) numbers
- 9. Create a pattern and ask a friend to find the rule for your pattern.