

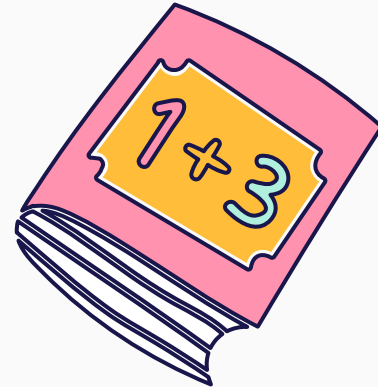
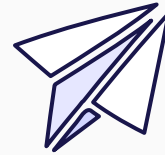
GENERATING A PATTERN GIVEN A CERTAIN RULE:

AR.Math.Content.4.OA.C.

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$$2 + 2$$

4TH GRADE



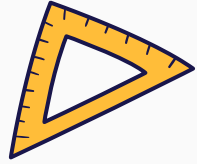
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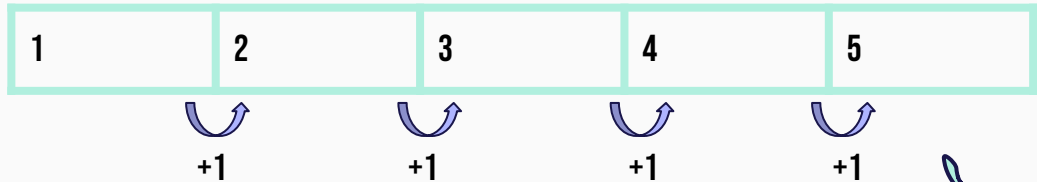
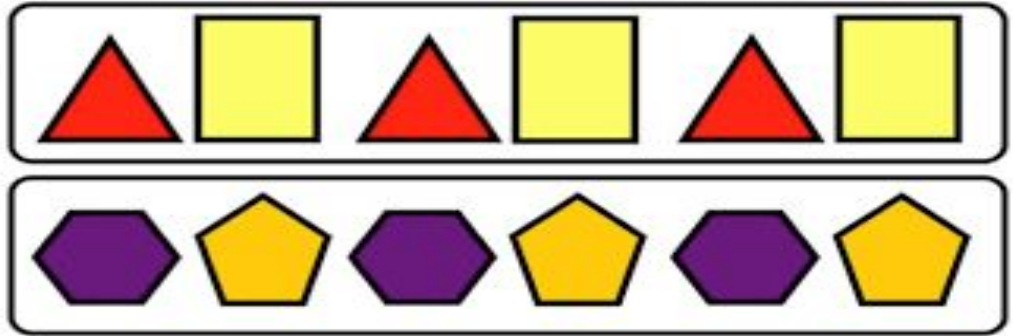
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- Generate a number or shape pattern that follows a given rule
- Identify apparent features of the pattern that were not explicit in the rule itself



WHAT IS A PATTERN?

A pattern is a sequence or series that repeats. In math, a numeric pattern is a repeated series or sequence of numbers given a specific rule.



Numbers can be Part of a Pattern:

2,4,6,8,10,12,14,16,

15,13,11,9,7,5

ALL OF THESE
NUMBERS ARE
PART OF THEIR
OWN PATTERN

2,7,12,17,22,27

70,65,60,55,50,45

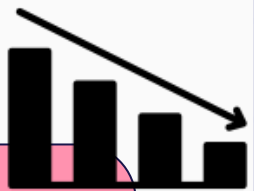
Understanding patterns:

Finding the relationships in patterns

Step 1: We ask ourselves if the pattern is increasing or decreasing?



When we increase we are either multiplying (\times) or adding ($+$)!
Example:
1,2,3,4... (we are adding by +1)



When we decrease we are either dividing (\div) or subtracting ($-$)!
Example:
5,4,3,2,1... (we are subtracting by one)

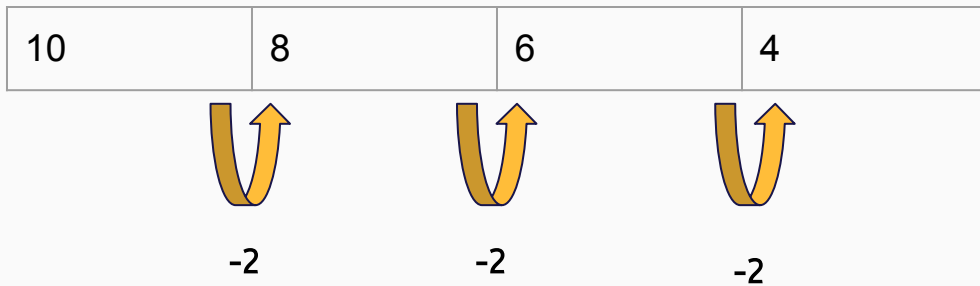
Step 2: How do we get from one number to the next? What relationship do the numbers share?

IN	OUT
1	5
2	6
3	7

+4

+4

+4



Step 3: Does the rule apply to every number?

IF YES, THAN THAT'S THE RULE!



If **NO**, then we need to try a **different** operation.

LET'S REVIEW:

We are going to identify the rule and continue to generate the pattern based on that given rule.



Let's Practice:

In	→	Out
10		7
9		6
7		4
5		
4		

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