

Didactical Document Theme-Based Trail on Sequences/Patterns (Grades 5-6)

Trail Codes: 263342; [693352](#)

Title	Grade	Main concepts	Students learn	Data to collect	Objects	MCM References
Counting	3	Subitizing	-Identify quantities through visual counting - Instantly recognize the number of elements in a set without counting	Visual recognition	Mobile Glass protection	4817996 8918015
Repetition pattern	5	Repetition pattern (ABC pattern)	- Determine a rule compatible with a partially known sequence	-Repetition unit	Objects in the playground disposed in a repetitive sequence (waist bin, bench, drinking fountain) Recycling bins	4917995 0618024
Repetition pattern	5	Repetition pattern (AB pattern) and measurement	- Determine a rule compatible with a partially known sequence - Measure distances and lengths using metric units and perform conversions	-Repetition unit -Measurement of the length of each element of the sequence	Goal frame Trees	2317994 4618023

			- Find the maximum common divisor between two numbers			
Combinatorial counting	5	Combinations (P(n,n) and 5 elements).	Solve problems involving multiplicative situations in a combinatorial sense	Number of elements	Car parking spots	3617989
Combinatorial counting	5	Combinations (P(n,r) and 2 elements).	Solve problems involving multiplicative situations in a combinatorial sense	Number of elements	Bicycle stand	1217990
Combinatorial counting	5	Combinations (P(n,r) and 3 elements).	Solve problems involving multiplicative situations in a combinatorial sense	Number of elements	Hand wash basins Football bench (seats) Bike parking spots	5617991 1917586 3717587
Growth pattern	5	Growth pattern (linear pattern) and measurement	- Determine a rule compatible with a partially known sequence - Measure distances and lengths using metric units and perform conversions	Known terms of the sequence (measurement of the length and width of the rectangles)	Drinking fountain Manhole cover	0917594 6918025
Growth pattern	6	Growth pattern (Fibonacci sequence)	Determine a rule compatible with a partially known sequence	Number of elements	Stairs	1317992 2418028

Growth pattern	6	Growth pattern (square numbers) (divisors)	Determine a rule compatible with a partially known sequence	Number of elements of different types	Lockers	1817998 1918029
Growth pattern	6	Growth pattern (square numbers)	Determine a rule compatible with a partially known sequence	-Visual recognition -Number of elements of different types	Chessboard in the playground Chessboard game Pavement	0217997 0518027 5918026

Notes:

The teacher should propose a trail with 7-8 tasks containing diversified concepts (subitizing, combinatorial counting, repetition pattern, growth pattern). It is also important to present tasks with different cognitive levels (low; high) to motivate/challenge students.