Patterning & Algebra

Types of Patterns		
Repeating	Growing	Shrinking
The pattern core repeats itself the same way each time	The pattern gets bigger in the same way each time	The pattern gets smaller in the same way each time
A B B A B B A B B A B B A B B	A B A B B A B B B A B B B B	A B B B B A B B B A B B B A B
2, 6, 5, 2, 6, 5, 2, 6, 5 (the set or core repeats)	2, 4, 6, 8, 10 (rule: +2 each time)	28, 26, 24, 22, 20 (rule: -2 each time)

Operation	Language	How to use it
Addition	plus, more, all together, both, all, increase, join, join, or, total, sum	___ + ___ = ___ ___ + ___ = sum
Subtraction	minus, take away, less, difference, remove, less than, left over, decrease, reduce, remains	___ - ___ = ___ ___ - ___ = difference
Multiplication	times, by, groups of, sets of, multiply, per, product, factors, multiples	___ x ___ = ___ ___ x ___ = product
Division	divide, share, each, out of, equal groups, average, evenly, every, ratio, split, quotient	___ / ___ = ___ ___ / ___ = quotient

Variable = Missing Number	
A + 6 = 10 → A = 4	16 - N = 9 → N = 5
8 x C = 48 → C = 6	72 / R = 9 → R = 8

Multiple Variables		
A + A = 20 → A = 10	A + B = 20 → A ≠ B	(A x 2) + B = 20 → A = 7, B = 6
A = the same number	A & B are different numbers	A & B are different numbers and all have to work together