Arithmetic and Geometric Sequences Formula Sheet:

	Arithmetic Sequence:	Geometric Sequence:
General N[th] term Formula:	$a_n = a_1 + (n-1)d$	$a_n = a_1(r^{n-1})$
Partial Sums Formula:	$S_n = \left(\dfrac{a_1 + a_n}{2}\right)n$	$S_n = \dfrac{a_1(1-r^n)}{1-r}$
Common Difference/Ratio:	$d = a_n - a_{n-1}$	$r = \dfrac{a_n}{a_{n-1}}$
Recursive Formulas:	$a_n = a_{n-1} + 1d$ $a_n = a_{n-2} + 2d$ $a_n = a_{n-3} + 3d$ $a_n = a_{n-k} + kd$	$a_n = a_{n-1}(r^1)$ $a_n = a_{n-2}(r^2)$ $a_n = a_{n-3}(r^3)$ $a_n = a_{n-k}(r^k)$
Mean (Average):	$M = \dfrac{a+b}{2}$	$M = \sqrt{ab}$
Infinite Sum:	*N/A*	$S_\infty = \dfrac{a_1}{1-r} \quad |r| < 1$