

H. Geometry – Chapter 2 – Definition Sheet

Section 2.2 (day 2)

Quadratic Sequences

- Sequences with two linear factors.
- When linear factors are multiplied together, the result is a second degree polynomial or a Quadratic function.

Practicing Quadratic Sequences

Term	1	2	3	4	5	6	....	n
Value	6	12	20	30	42	56	....	$(n+1)(n+2)$
factors	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{4}{5}$	$\frac{5}{6}$	$\frac{6}{7}$	$\frac{7}{8}$		$\frac{n+1}{n+2}$
	$(1) + \frac{1}{1} = 2$	$(2) + \frac{1}{1} = 3$		$n + \frac{2}{1} = \dots$	$1 + \frac{2}{1} = 3$	$2 + \frac{2}{1} = 4$		

Term	1	2	3	4	5	6	....	n
Value	1	6	15	28	45	66	....	$n(2n-1)$
factors	$\frac{1}{1}$	$\frac{2}{3}$	$\frac{3}{5}$	$\frac{4}{7}$	$\frac{5}{9}$	$\frac{6}{11}$		$\frac{n}{2n-1}$
	$2(1) + \frac{-1}{1} = 1$	$2(2) + \frac{-1}{1} = 3$						

Term	1	2	3	4	5	6	....	n
Value	1	5	12	22	35		....	$\frac{n(3n-1)}{2}$
Double	2	10	24	44	70			
Factors	$\frac{1}{2}$	$\frac{2}{5}$	$\frac{3}{8}$	$\frac{4}{11}$	$\frac{5}{14}$	$\frac{n}{3n-1}$		un-double
	$3(1) + \frac{-1}{1} = 2$	$3(2) + \frac{-1}{1} = 5$						