

Next = last + 2

output $f(9) = 7$

$f(x) = 7$
 $x = 9$

Recursive formula:
Next = last + 2

Explicit equation:
 $f(x) = 3x - 1$
 $y = 3x - 1$
 $= 3x - 2$

My thoughts

Day	Pushups	Process
1	3	3
2	5	3+2
3	7	3+2+2
4	9	3+2+2+2
5	11	
10	21	

Recursive = +2

831-15

$3+2(x-1)$
 $y = 3x - 1 + 2$

① Day 5 Add on day 10

② Make a table - process column

③ Make a graph

④ Explicit equation

My thoughts

Q: 1. How many pushups will Scott do on day 5? Day 10?

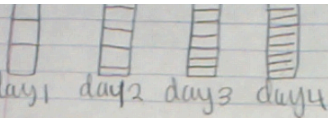
2. Make a table - including Process column

3. Make a graph

4. Write explicit equation

A: 1. day 5 he will do 11 pushups.
day 10 he will do 21 pushups

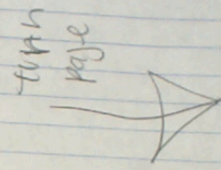
day	pushups	process
1	3	3+2(0)
2	5	3+2 $3+2^1(1)$
3	7	3+2+2 $3+2^2(2)$
4	9	3+2+2+2 $3+2^3(3)$
5	11	3+2 ⁴ (4)
10	21	3+2 ⁹ (9)
N	N	3+2 ^(N-1)



day1 day2 day3 day4

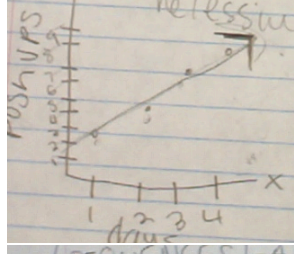
MY THOUGHTS

- to know what you already know
- how many pushups scott can do a day 5 all day of 64
- Make a table - including process column
- Graph
- Make an explicit equation $3 + 2(n-1) = P_n$



days	pushups	process	equation	or anti
1	3	$3 = 3 + 2(0)$		$3 + 2n + 3$
2	5	$3 + 2 = 3 + 2(1)$		$2n + 3 + 3$
3	7	$3 + 2 + 2 = 3 + 2(2)$		$Y = 2n + 1 + 3$
4	9	$3 + 2 + 2 + 2 = 3 + 2(3)$		
n		$3 + 2(n-1)$		

constant diff
recursive equation: to get next term always one to



SEQUENCES - list of # w/ a pattern

example: $3, 5, 7, 9, \dots$

Arithmetic Sequence

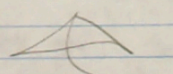
example, 1, 5, 9, 13

Adding/subtracting

how to write Explicit function

x = input y = output

days	pushups
1	$f(1) = 3$
2	$f(2) = 5$
3	$f(3) = 7$
4	$f(4) = 9$
5	$f(5) = 11$
50	$f(50) = 3 + 2(49) = 101$
n	$f(n) = 3 + 2(n-1) = 2n + 1 = f(n)$



Day 10?

2. ~~Non-recursive~~ **Recursive**

constant difference
[slope/constant + arithmetic]

Days	Pushups	Process
1	3	$3 = 3$
2	5	$3 + 2 = 5$
3	7	$3 + 2 + 2$
4	9	$3 + 2 + 2 + 2$
5	11	$3 + 2 + 2 + 2 + 2$
10	21	$3 + 2(9) = 21$

recursive: next Previous + 2

3.

4. $2n + 1 = y$ $3 + 2(n-1) = y$

5. next step + 2

A. $3 + 2(n-1) = P$

$3 + 2(n-1)$
 $3 + 2n - 2$
 $2n + 3 + (-2)$
 $y = 2n + 1$

explicit relation

Sequences: list of #s with a pattern

ex: $y = 3, 5, 7, 9, 11, \dots$
 $x = 1, 2, 3, 4, 5, \dots$

Arithmetic Sequence
 ex: $1, 5, 9, 13, \dots$

adding,
 subtracting

explicit function

write explicit function

Days	Pushups
1	$f(1) = 3$
2	$f(2) = 5$
3	$f(3) = 7$
4	$f(4) = 9$
5	$f(5) = 11$

$P = 3 + 2(n-1)$
 $y = 2n + 1$

So $f(50) = 3 + 2(49) = 101$
 $f(n) = 3 + 2(n-1)$
 or $f(n) = 2n + 1$