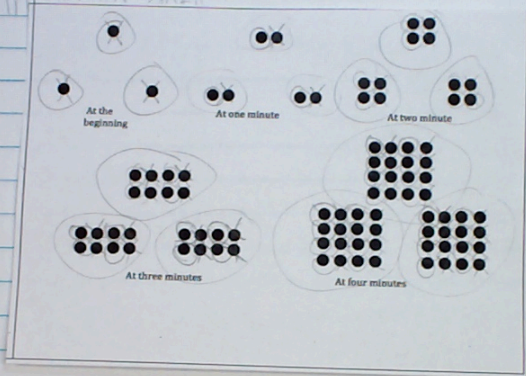


1. Pattern? show in picture?
 - add double the amount of dots that are in each of the 3 groups.
 and its shown in the picture by the # of increased dots.



2. minutes	# of dots	Process
0	3	$3(1) = 3 \cdot 2^0$ <small>zero power</small>
1	6	$3(2) = 3 \cdot 2 = 3 \cdot 2^1$ <small>one</small>
2	12	$3(4) = 3 \cdot 2 \cdot 2 = 3 \cdot 2^2$
3	24	$3(8) = 3 \cdot 2 \cdot 2 \cdot 2 = 3 \cdot 2^3$
4	48	$3(16) = 3 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 3 \cdot 2^4$
4. 5	96	$3 \cdot 2^5$
100		$3 \cdot 2^{100}$
t		$3 \cdot 2^t$

5. $3 \cdot 2^x = y$

Function notes

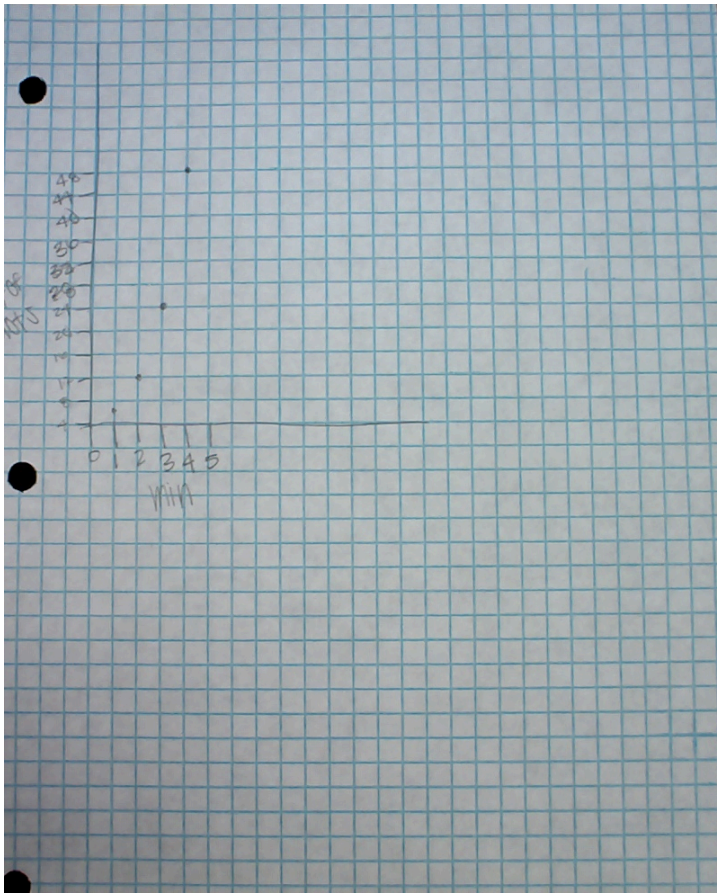
INPUT/n	0	2	7	9	-4
OUTPUT/f(n)	9	-2	4	7	1

$f(2) = -2$ input x $f(n) = 7$ output $n = 9$

$f(-4) = 1$ $f(n) = 9$, $n = ?$ $n = 0$

explicit equation
 $1 + 3(n-1) = y$ ex = $3 \cdot 2^t$ any number of dots

Recursive = next = Previous and add what it is decreasing/increasing by



My thoughts

1. Double dots in each section every minute.
2. Make a table
3. Graph

Minutes	Dots	Process
0	3	$3(1)^0$
1	6	$3(2)^1$
2	12	$3(2)^2$
3	24	$3(2)^3$
4	48	$3(2)^4$
5	96	$3(2)^5$

$t = \text{time}$
Anything to the 0th power is 1

Recursive
Finding the next number down

mid
0 3
+ 3
3 6
+ 6
9 12
+ 12
21 18
+ 18
39 24
+ 24
63 30
+ 30
93 36
+ 36
129 42
+ 42
171 48

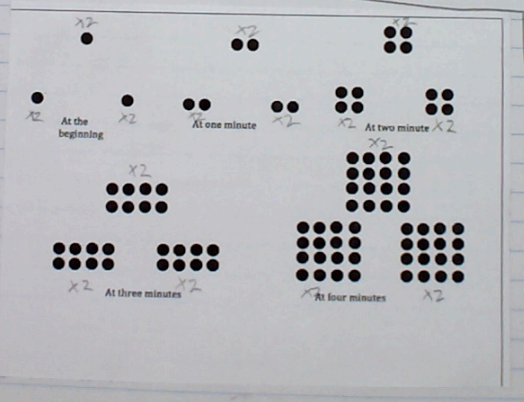
Find six

Explicit Equation

mid
0 3
+ 3
3 6
+ 6
9 12
+ 12
21 18
+ 18
39 24
+ 24
63 30
+ 30
93 36
+ 36
129 42
+ 42
171 48

Find 100

4. 5 dots = 96 dots
5. Equation, $t = 3(2)^t$



Function Notes

input x	0	2	7	9	-4
output y	9	-2	4	7	1

$f(2)$ means that the two is the input.

$f(2) = \boxed{-2}$ = the output

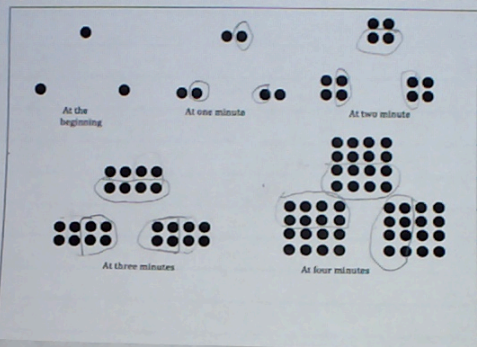
$f(-4) = 1$

$x = n$

$y = f(n)$

$f(9) = 7, n = 9$

MY thoughts



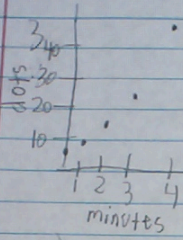
1. After every minute the dots multiplies by 2

minutes	dots	process	equation
0	3	$3 \times 2(0)$	$3 = 3 \cdot 2^0$
1	6	$3 \times 2(1)$	$3 \cdot 2 = 3 \cdot 2^1$
2	12	$3 \times 2(2)$	$3 \cdot 2 \cdot 2 = 3 \cdot 2^2$
3	24	$3 \times 2(3)$	$3 \cdot 2 \cdot 2 \cdot 2 = 3 \cdot 2^3$
4	48	$3 \times 2(4)$	$3 \cdot 2 \cdot 2 \cdot 2 \cdot 2 = 3 \cdot 2^4$
50			$3 \cdot 2^{50}$
-1		$y = 3 \cdot 2^x$	$3 \cdot 2^1 = 6$

recursive equation "next one"

Explicit Equation

any thing to the zero power one



function notes

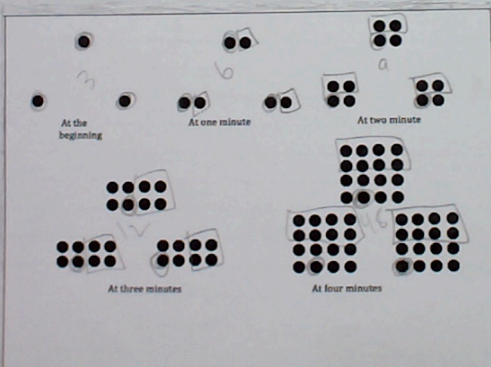
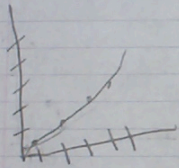
input	x	0	2	7	9	4
output	y	3	12	48	144	162

input $f(x)=y$

$f(2) = 12$ $f(x) = 48, x = ?$

$y = 3 \cdot 2^x$ → explicit equation

recursive equation → "next one"
to get the next one we times by 2
previus number and then by 2.



my thoughts

it adds 2

x	y	3x2(x)
0	3	3x2(0)
1	6	3x2(1)
2	12	3x2(2)
3	24	3x2(3)
4	48	3x2(4)

function notes

input	x	0	2	7	9	-4
output	y	0	2	4	7	1

input $x=2$
 $f(2) = \frac{\quad}{\text{output}}$

$f(x) = 7$

$x = -4$

$f(-4) = 1$