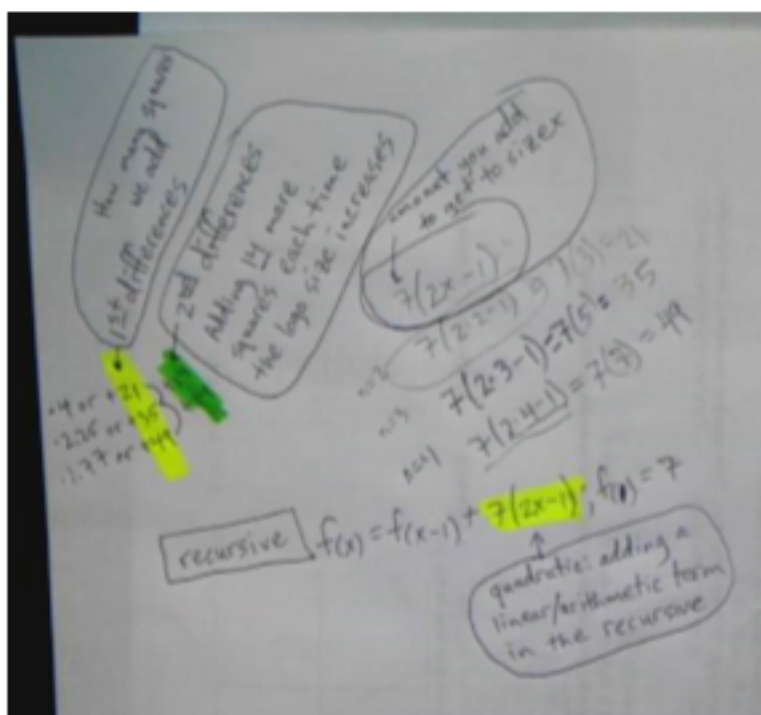


1st M2 1.2



Total	1	2	3	4	5	6	7	8	9	10
X	1	2	3	4	5	6	7	8	9	10
Y	3	5	7	9	11	13	15	17	19	21

1st M2 1.3

$x(x+2)$

each time x increases
high-nums increase by
2

1=3, 7+5=12
2=6, 7+7=14
3=9, 7+9=16
4=12

$f(x) = f(x-1) + 2$; Recursive
 $f(1) = 3$
or $f(x) = 2x + 1$ Explicit

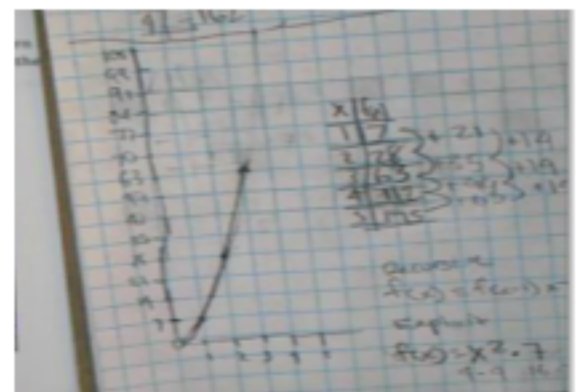
Make circles in a grid with making the top "bigger" so that it looks stronger

Here's what to look for with:

3rd M2 1.2

ice blocks

1	7
2	13
3	19
4	25

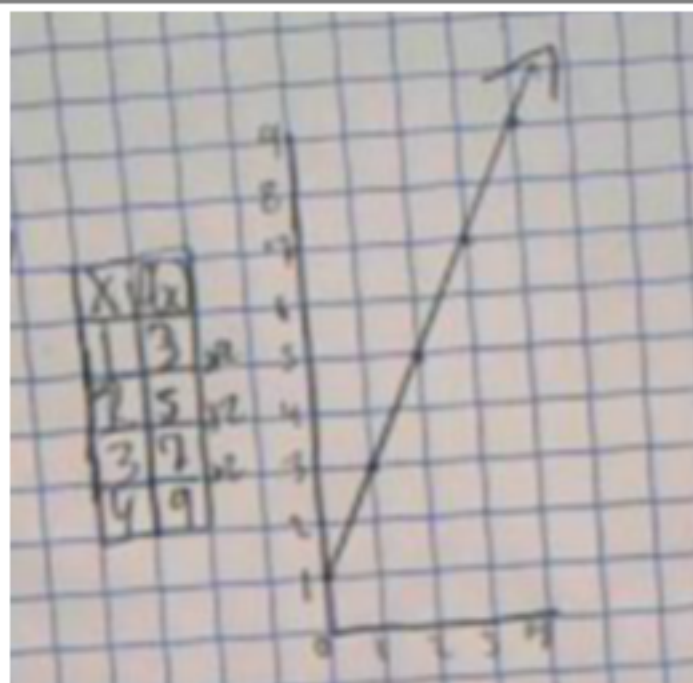


Adding $x + (x-1)$ each time
 $2x - 1$

Recursive: $f(x) = f(x-1) + 2x - 1$; $f(1) = 7$

3rd M2 Linear vs. Quadratic Summary

Linear vs.	Quadratic																				
<p>Table</p> <p>constant</p> <table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>2</td> </tr> <tr> <td>2</td> <td>4</td> </tr> <tr> <td>3</td> <td>6</td> </tr> <tr> <td>4</td> <td>8</td> </tr> </tbody> </table> <p>Arrows indicate a constant difference of +2 between consecutive f(x) values.</p>	x	f(x)	1	2	2	4	3	6	4	8	<p>2nd differences are constant</p> <table border="1"> <thead> <tr> <th>x</th> <th>f(x)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>7</td> </tr> <tr> <td>2</td> <td>28</td> </tr> <tr> <td>3</td> <td>63</td> </tr> <tr> <td>4</td> <td>112</td> </tr> </tbody> </table> <p>Arrows indicate first differences of +21, +35, +49 and a constant second difference of +14.</p>	x	f(x)	1	7	2	28	3	63	4	112
x	f(x)																				
1	2																				
2	4																				
3	6																				
4	8																				
x	f(x)																				
1	7																				
2	28																				
3	63																				
4	112																				
<p>Graph</p> <p>straight line</p>	<p>curve: parabola (U-shape)</p>																				
<p>Explicit</p> <p>no exponents (x¹)</p> <p>$f(x) = 2x + 2$</p> <p>makes it linear</p>	<p>x-squared (1 variable squared)</p> <p>$f(x) = 7x^2$</p>																				
<p>Recursive</p> <p>Add/subtract constant</p> <p>$f(x) = f(x-1) + 2$</p> <p>$f(x) = f(x-1) - 2$</p>	<p>Add/subtract linear term (x)</p> <p>$f(x) = f(x-1) + 2x - 1$</p>																				



3rd M2
1.3

explicit
 $f(x) = 2x + 1$

recursive
 $f(x) = f(x-1) + 2, f(1) = 3$

6th Summary: Writing Equations for Exponential Functions

Writing equations Summary: Geometric/Exponential Functions

Recursive

new term = previous term $\cdot 10$

$f(x) = f(x-1) \cdot 10; f(1) = 8$

Starting term
 $f(0)$ or $f(1)$
 "0" term 1st term

Explicit

$8 \cdot 10^6$ $x=7$
 $8 \cdot 10^4$ $x=5$

$f(x) = 8 \cdot 10^{(x-1)}$

Geometric/Exponential Function

1.

1. $f(x) = -7x + 2700$

2. $f(x) = 17x - 17$ $100 \cdot 2000$

3.

1	2	3
people	people	people
100	200	300

4. $y = 300 - 20x$

6th M1 1.6

2.

Representations 2

$x = \text{cost}$
 $m(x) =$

1	25	+25
2	50	+25
3	75	+25
4	100	+25

recursive

$f(x) = f(x-1) + 0.25; f(0) = 0$

explicit

100 customers $\cdot 0.25 = \$25.00$

$f(x) = x \cdot 0.25$