

1/27

# Sequences - ordered set of #

Arithmetic

algebraic

# + variables

numbers

+3 +3 +3

ex 3, 6, 9, 12, 15

Add 3 to the

Previous term

each digit (#)

## Positions

4, 8, 12, 16  
1st pos. 2nd pos. 3rd pos. 4th pos.  
multiples of 4

Define Variable  
Let  $x =$  <sup>position of term</sup>

$$4x$$

Increasing- Sequence  
uses addition, mult.  
or both

Digit is  
term

$\frac{2}{1^{\text{st}} \text{ posit.}}$ ,  $\frac{4}{2^{\text{nd}} \text{ pos}}$ ,  $\frac{6}{3^{\text{rd}} \text{ pos.}}$ ,  $\frac{8}{4^{\text{th}} \text{ pos.}}$ ,  $\underline{10}$

Rule  
Add 2 to previous term

$(2n)$  let  $n =$  position  
of  
term

Decrease  
Subtraction  
or  $\div$   
or combo

## Arithmetic Sequence

Adding the same #  
to the previous term

ex 5, 10, 15, 20  
adding 5  
to previous  
term

Counter example: 4, 5, 7, 10, 14, 19  
+1 +2 +3 +4 +5  
Not Arith. Seq.

# Sequences

1, 2, 3, 4

add 1

previous term

1, 3, 5, 7, 9

add 2 - start odd #

2, 4, 6, 8, 10

" " start even #

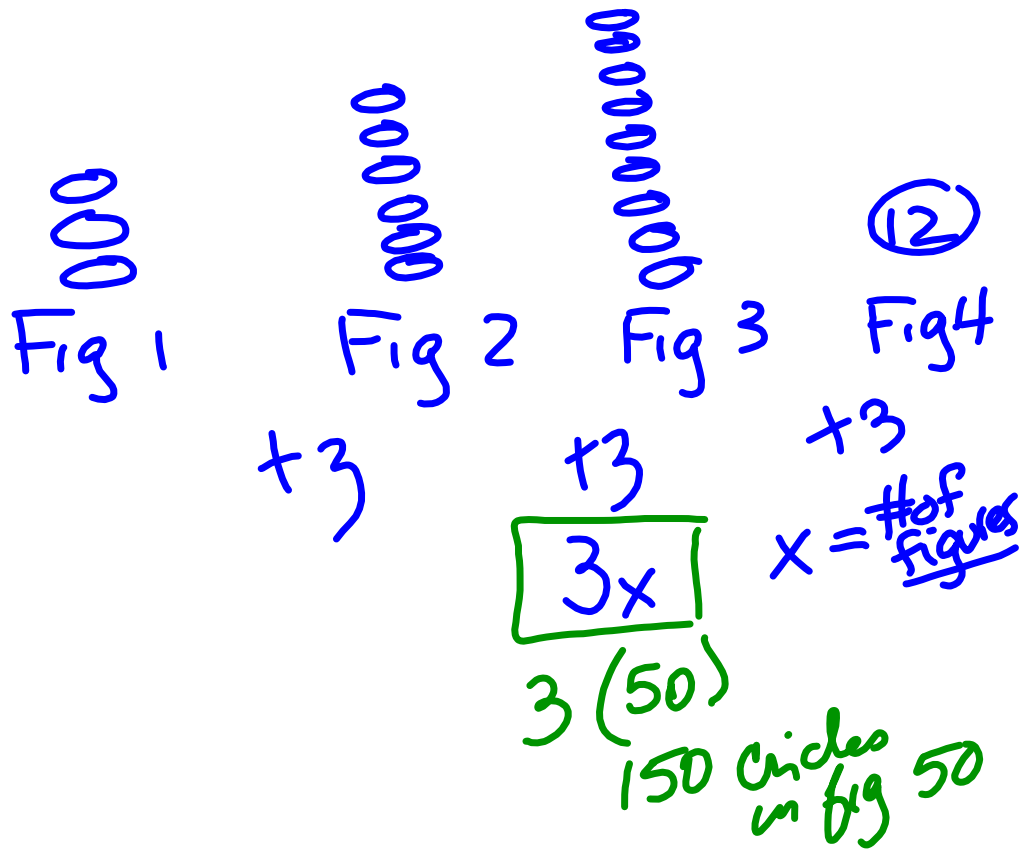
6, 12, 18, 24, 30

multiples of 6

$\triangle$   $\circ$   $\triangle$   $\circ$   $\triangle$   $\circ$

$\square$  ?  $\square$   $\square$   $\square$   $\square$   $\square$

<u>Year</u>	<u># Dolls</u>	<u><math>n = \# \text{ years}</math></u>
1	6	every year
<u>p. 360</u> 2	12	Hannah rec. 6 dolls <u>In 11 yrs</u>
3	18	(11) 6 n.



# Patterns

Arithmetic Sequencing  
Adding same #  
to the previous  
term

Term

① 2, 3, 4, 5

Add 1

② 4, 6, 8, 10

Add 2

Starting  
even #

1, 3, 5, 7, 9

Started  
odd #

Money

5¢  
10¢  
25¢