

### difference

Recursive:

Explicit:

$$a_1 = \underline{\quad}$$

$$a_n = a_{n-1} + d$$

$$a_n = a_1 + (n-1)d$$

$a_{n-1}$  = previous term

Ex 1

a. -7, -3, 1, 5, 9 yes; 4, 13

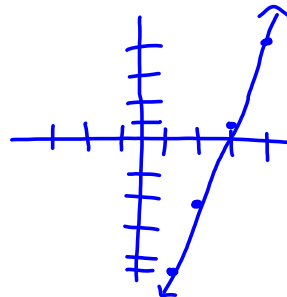
b. 5, 22, 39, 56 yes; 17; 73

c. 8, 9, 11, 14, 18 no

d. 19, 12, 5, -2, -9 yes; -7; -16

Ex 2

x	y
1	-5
2	-2
3	1
4	4



a. -11, -6, -1, 4, 9

$d = 5$

$a_1 = -11$

Recursive

$$a_1 = -11$$

$$a_n = a_{n-1} + 5$$

Explicit

$$a_n = a_1 + (n-1)d$$

$$a_n = -11 + (n-1)5$$

$$= -11 + 5n - 5$$

$$a_n = 5n - 16$$

b. 4, 13, 22, 31, 40, ...

$d = 9$   $a_1 = 4$

Recursive

$$a_1 = 4$$

$$a_n = a_{n-1} + 9$$

Explicit

$$a_n = 4 + (n-1)9$$

$$= 4 + 9n - 9$$

$$a_n = 9n - 5$$

8, 6, 4, 2, 0, -2, ...

$d = -2$   $a_1 = 8$

Recursive

$$a_1 = 8$$

$$a_n = a_{n-1} - 2$$

Explicit

$$a_n = 8 + (n-1)(-2)$$

$$= 8 - 2n + 2$$

$$a_n = -2n + 10$$