

Find the next 6 terms of each sequence. Graph each sequence as a set of ordered pairs in the coordinate plane.

-5, 2, 7, 10... 11, 10, 7, 2, -5

\checkmark +7 \checkmark +3 \checkmark +1 \checkmark -1 \checkmark -3 \checkmark -5 \checkmark -7
 \checkmark -2 \checkmark -2 \checkmark -2 \checkmark -2 \checkmark -2 \checkmark -2

x	y
1	-5
2	2
3	7
4	10
5	11
6	10
7	7

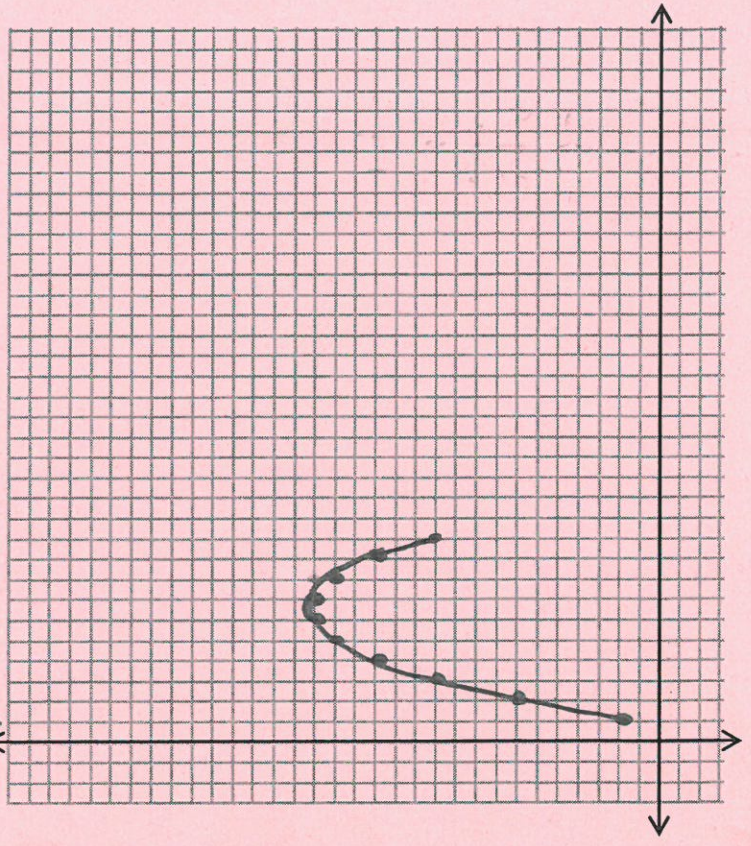
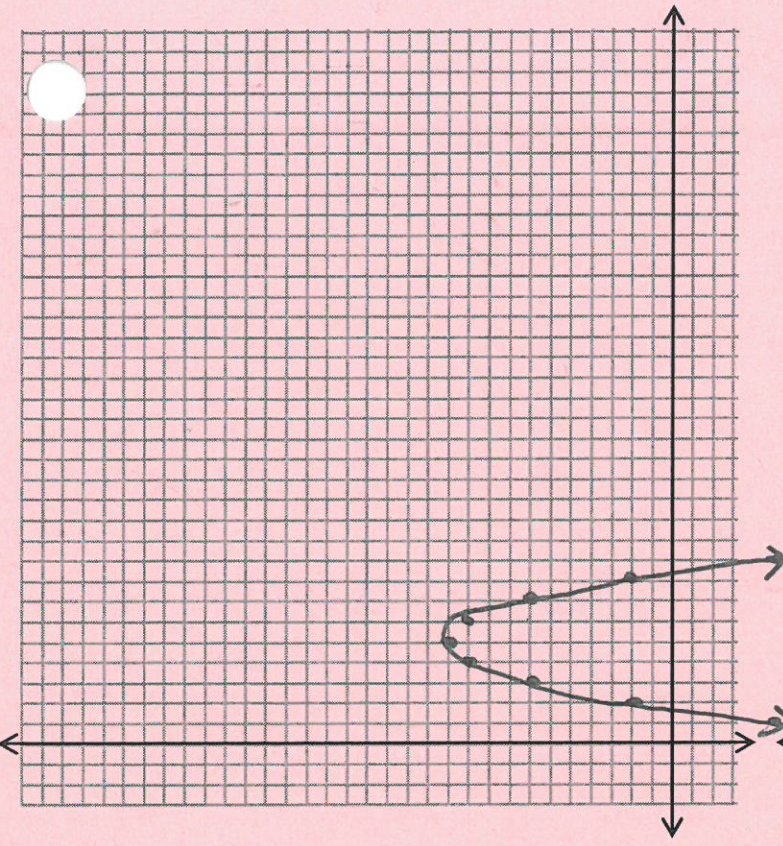
Vertex

2, 7, 11, 14... 16, 17, 16, 14, 11

\checkmark +5 \checkmark +4 \checkmark +3 \checkmark +2 \checkmark +1 \checkmark +0 \checkmark -1 \checkmark -2 \checkmark -3
 \checkmark -1 \checkmark -1 \checkmark -1 \checkmark -1 \checkmark -1 \checkmark -1

x	y
1	2
2	7
3	11
4	14
5	16
6	17
7	17
8	16
9	14

vertex must be at $x=6.5$
due to symmetry.



~~1, 0, 1, ...~~
 $1, 4, 9, 16, 25, 36, 49$
 $\sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad}$
 $-5 -3 -1 +1 +3 +5 +7 +9 +11 +13$

x	y
1	9
2	4
3	1
4	0
5	1
6	4
7	9
8	16

vertex must be at (4, 0)

$13, 8, 4, 1, \dots, -1, -2, -2, -1, 1, 4$
 $\sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad} \sqrt{\quad}$
 $-5 -4 -3 -2 -1 0 +1 +2 +3$

x	y
1	13
2	8
3	4
4	1
5	-1
6	-2
7	-1
8	1
9	4
10	9

Where do you think the vertex is located?

