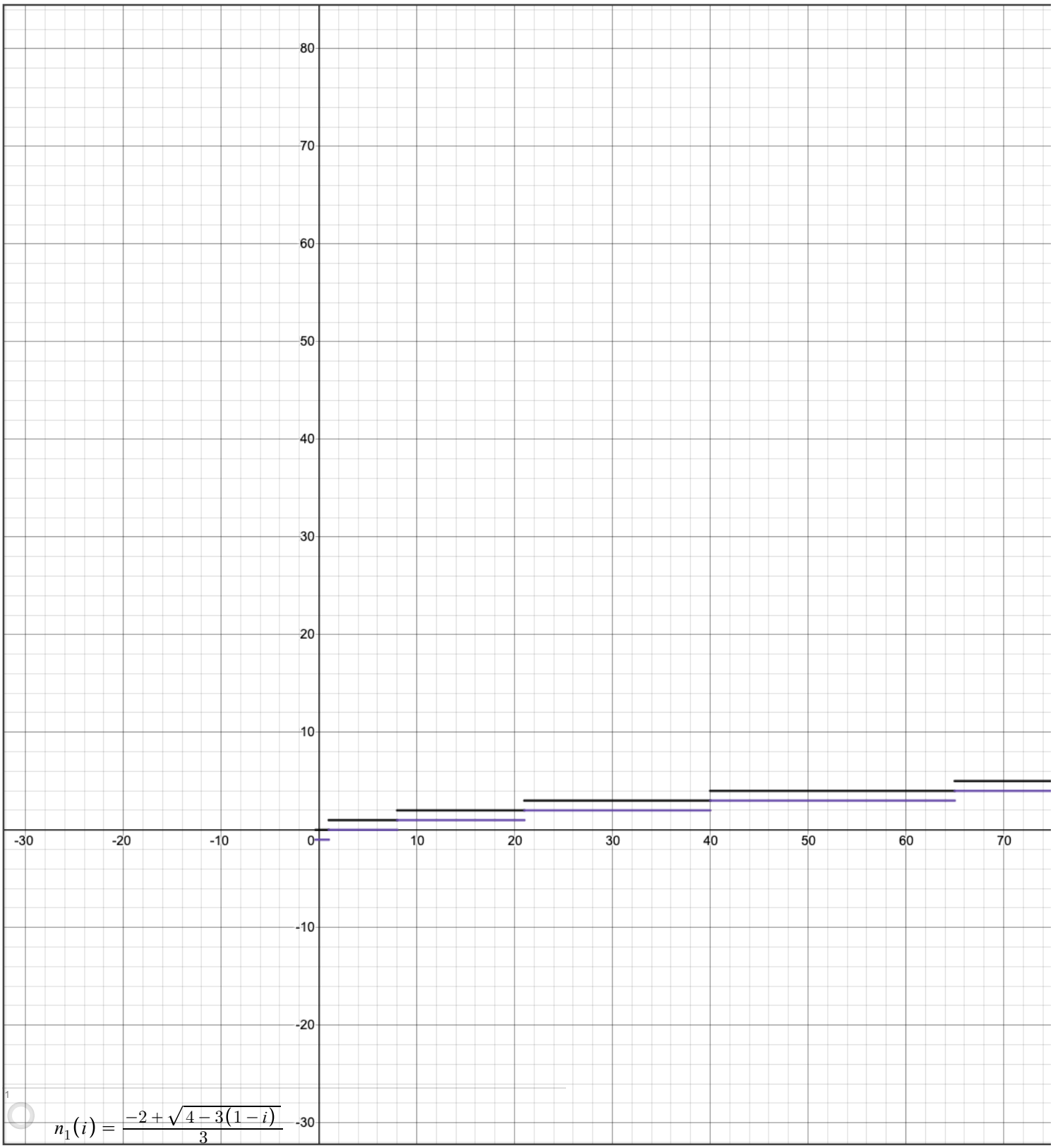


1 $n_1(i) = \frac{-2 + \sqrt{4 - 3(1 - i)}}{3}$

2 $n_2(i) = \frac{\left(-5 + \sqrt{25 - 3(8 - i)}\right)}{3}$

3

4 $a = 32$

5 $R(n) = (n + 1)(3n + 1)$

6
$$n_1(a)$$
$$= 2.61628593393$$

7
$$n_2(a)$$
$$= 1.61628593393$$

8
$$R(1)$$
$$= 8$$

9
$$I(i) = \text{floor}\left(n_1(i)\right)+1$$

10
$$E(i) = \text{floor}\left(n_2(i)\right)+1$$

11
$$n_r = I(a)$$
$$n_r = 3$$

12
$$R\left(n_r\right)$$
$$= 40$$

13
$$s_i = a - R\left(n_r - 1\right)$$
$$s_i = 11$$

14
$$N(x) = 6x + 1$$

15
$$N\left(n_r\right)$$
$$= 19$$

16
$$R\left(n_r\right) - R\left(n_r - 1\right)$$
$$= 19$$

17
$$i_p(n,s) = \left\{s < 5n + 1 : \min\left(4, \text{floor}\left(\frac{s}{n}\right)\right), s \geq 5n + 1 : 5\right\}$$

18
$$r_p = i_p\left(n_r, q\right)$$
$$r_p = 3$$

19
$$q = 9$$

20
$$s_p(n,i) = \left\{i \geq 5 : 5n + 1, i < 5 : i \cdot n\right\}$$

21
$$s_p\left(n_r, r_p\right)$$
$$= 9$$