

2. Sketch the graph of the equation  $y = x^2$  for positive values of  $x$ . Organize your work using the table below, and then answer the questions that follow.

$x$	$y$
0	0
1	1
2	4
3	9
4	16
5	25
6	36

- a. Plot the ordered pairs on the coordinate plane.



3. Sketch the graph of the equation  $y = 180(x - 2)$  for whole numbers. Organize your work using the table below, and then answer the questions that follow.

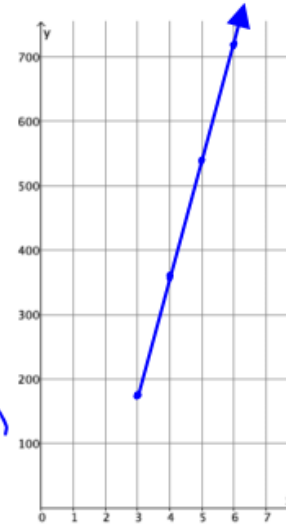
$x$	$y$
3	180
4	360
5	540
6	720

$$\begin{aligned} f(3) &= 180(3-2) \\ &= 180(1) \\ &= 180 \end{aligned}$$

$$\begin{aligned} f(4) &= 180(4-2) \\ &= 180(2) \\ &= 360 \end{aligned}$$

$$\begin{aligned} f(5) &= 180(5-2) \\ &= 180(3) \\ &= 540 \end{aligned}$$

$$\begin{aligned} f(6) &= 180(6-2) \\ &= 180(4) \\ &= 720 \end{aligned}$$



- Plot the ordered pairs on the coordinate plane.
- What shape does the graph of the points appear to take?
- Is this graph a graph of a function? How do you know?
- Is this a linear equation? Explain.
- The sum  $S$  of interior angles, in degrees, of a polygon with  $n$  sides is given by  $S = 180(n - 2)$ . If we take this equation as defining  $S$  as a function of  $n$ , how do you think the graph of this  $S$  will appear? Explain.
- Is this function discrete? Explain.