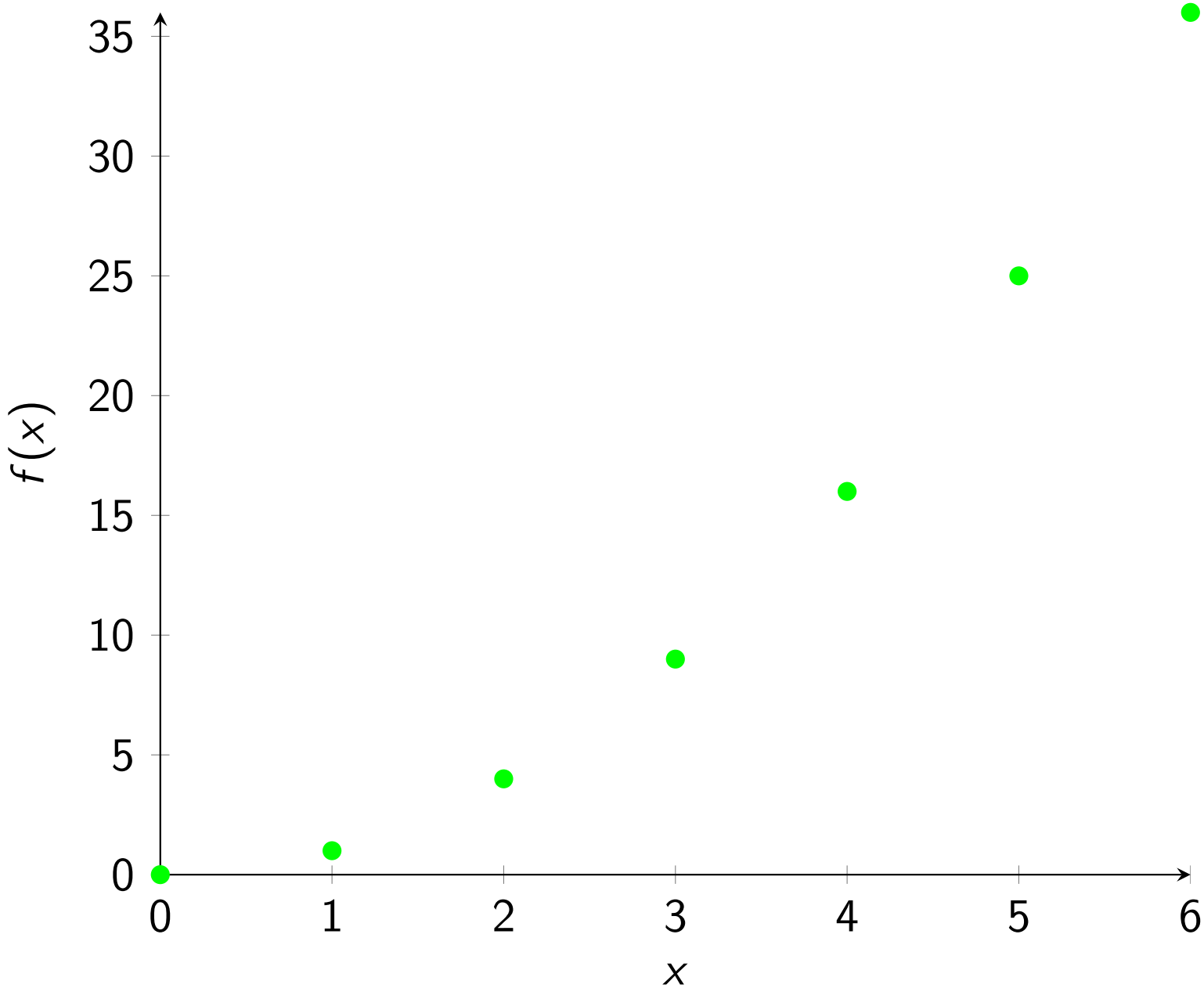
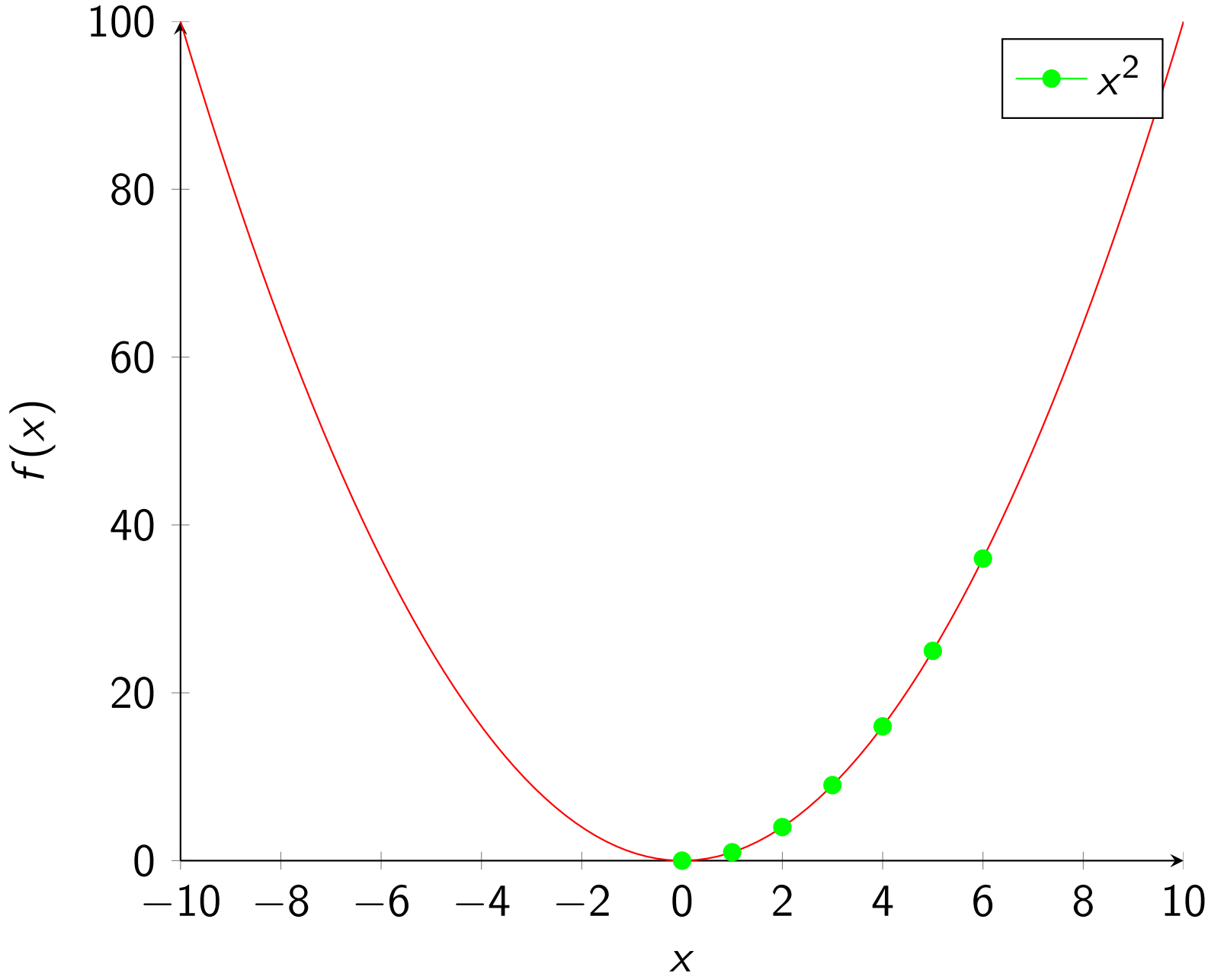
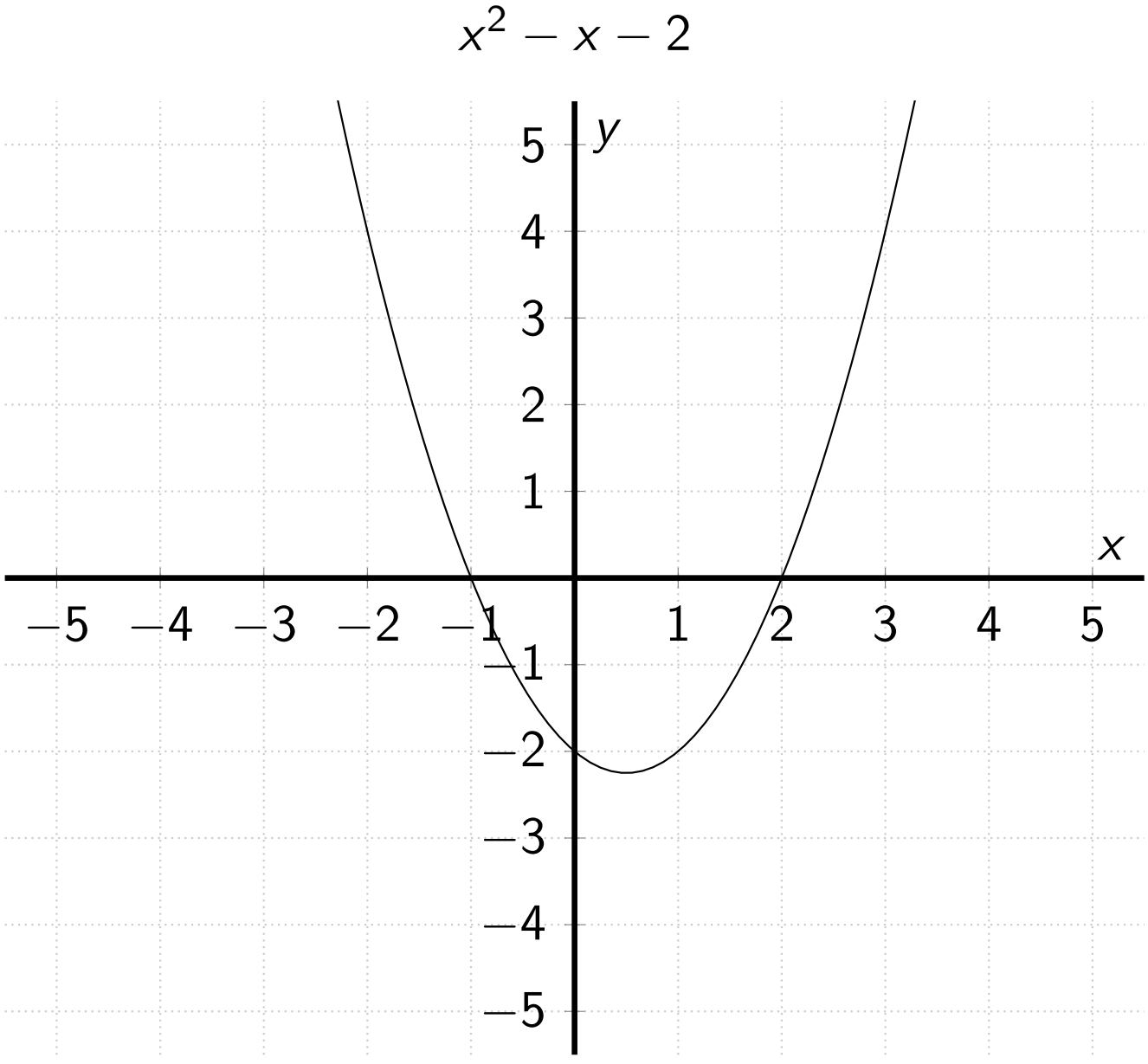
Zeroes of A Polynomial

April 27, 2020


35
30
25
20
15
10
5
0
$f(x)$
0
1
2
3
4
5
6
x


100
80
60
40
20
0
$f(x)$
−10
−8
−6
−4
−2
0
2
4
6
8
10
x
x^2


$x^2 - x - 2$
y
x
5
4
3
2
1
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
1
2
3
4
5

$x^2 - x - 2$

$$x^2 - x - 2$$
$$x \qquad\qquad 1$$

$$
\begin{array}{ll}
x^2 - x - 2 & \\
x & 1 \\
x & -2
\end{array}
$$

$$
\begin{array}{ll}
x^2 - x - 2 & \\
x & 1 \\
x & -2 \\
-2x + x = -x &
\end{array}
$$

$$x^2 - x - 2$$
$$x \qquad\quad 1$$
$$x \qquad\quad -2$$
$$-2x + x = -x$$
$$(x+1)(x-2)$$

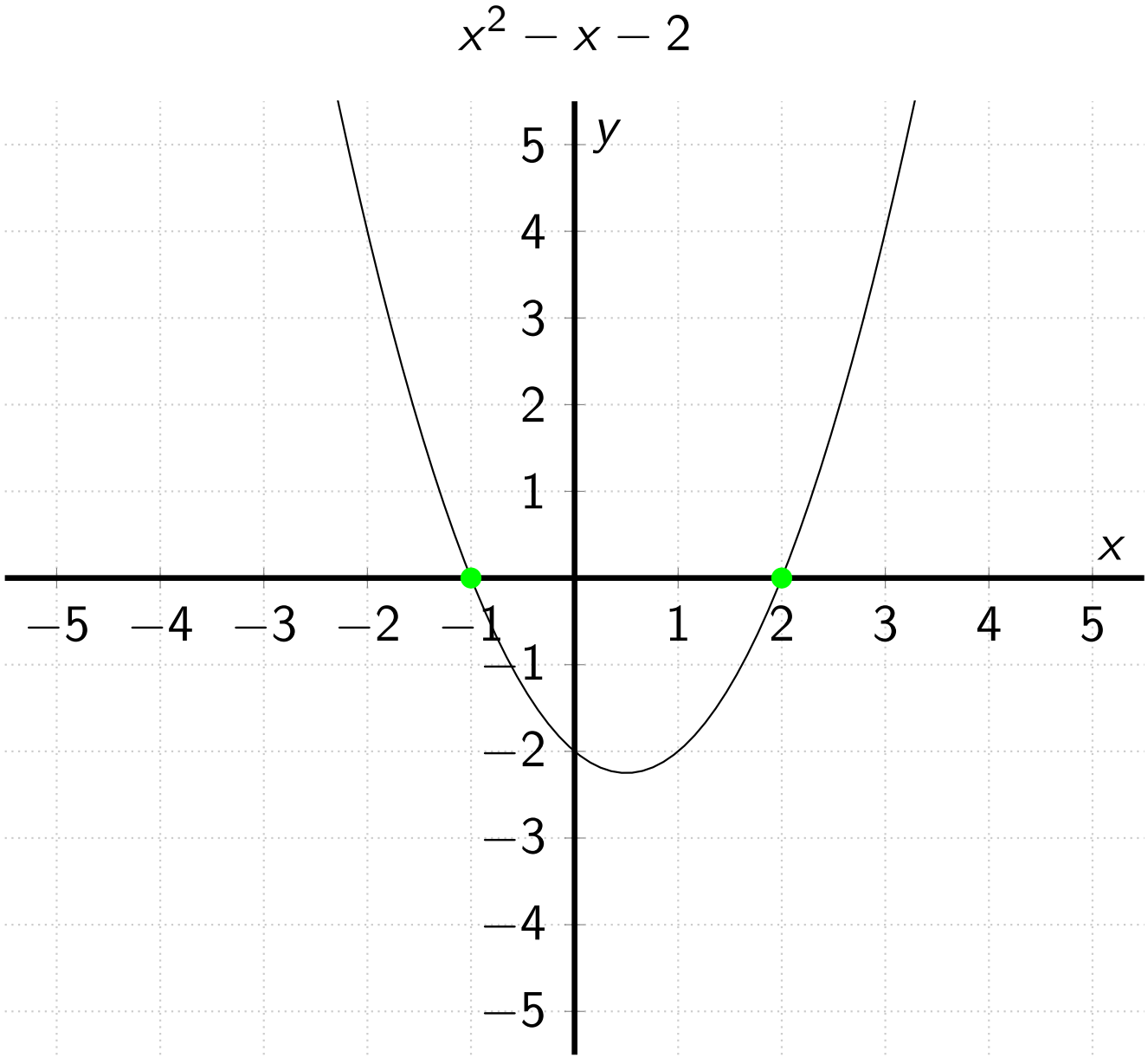
$$f(x) = (x + 1)(x - 2) = 0$$

$$f(x) = (x+1)(x-2) = 0$$
$$f(-1) = (-1+1)(-1-2)$$

$f(x) = (x + 1)(x - 2) = 0$
$f(-1) = (-1 + 1)(-1 - 2) = (0)(-3) = 0$

$$f(x) = (x+1)(x-2) = 0$$
$$f(-1) = (-1+1)(-1-2) = (0)(-3) = 0$$
$$f(-1) = (2+1)(2-2)$$

$$f(x) = (x+1)(x-2) = 0$$
$$f(-1) = (-1+1)(-1-2) = (0)(-3) = 0$$
$$f(-1) = (2+1)(2-2) = (3)(0) = 0$$


$x^2 - x - 2$
y
x
5
4
3
2
1
−1
−2
−3
−4
−5
−5
−4
−3
−2
−1
1
2
3
4
5