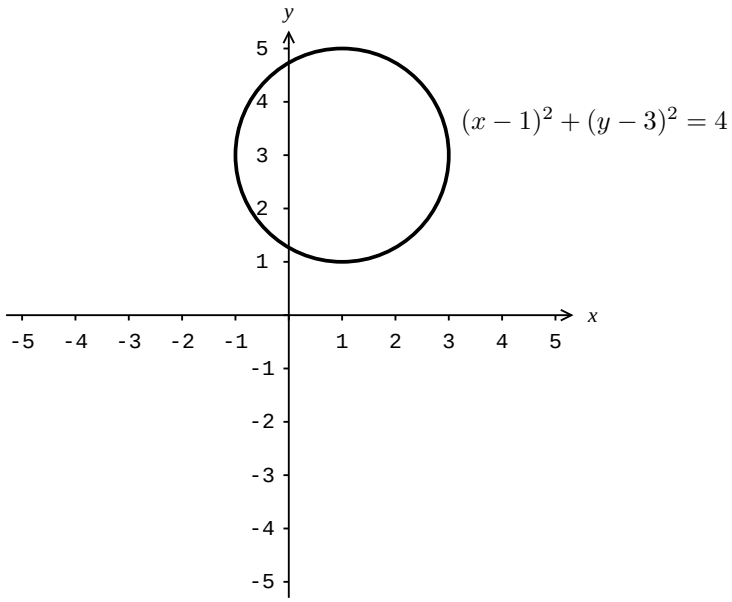
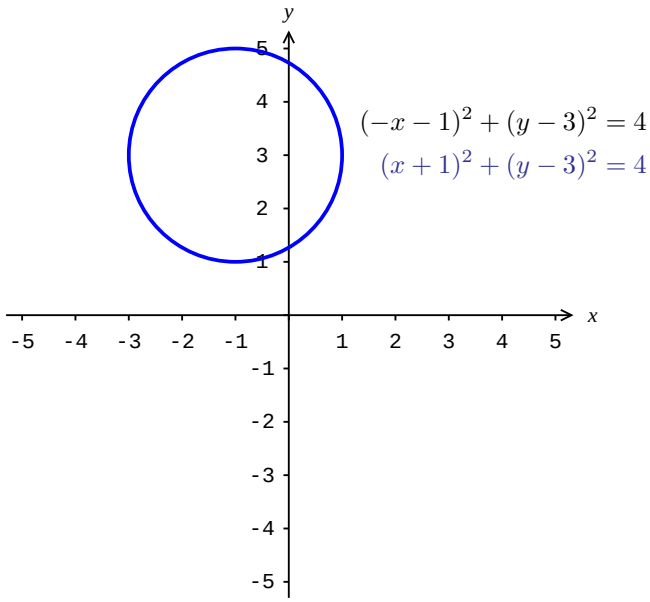
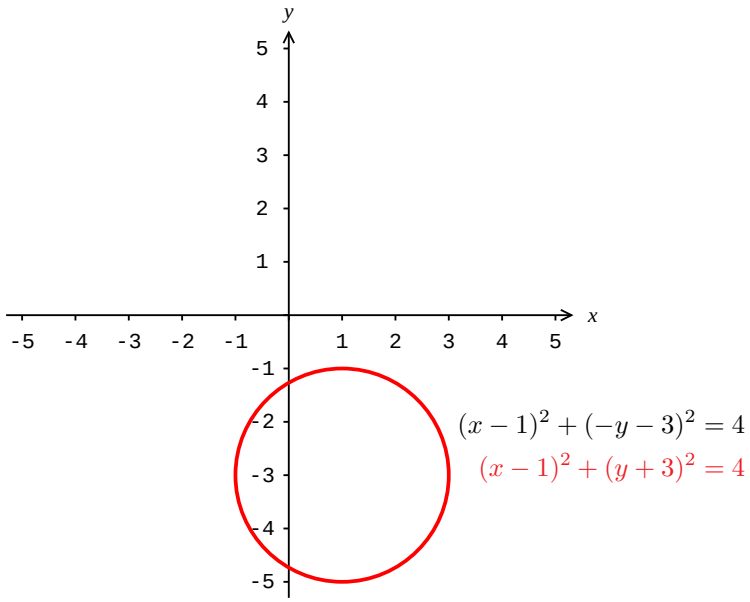

y
x
5
4
3
2
1
-5
-4
-3
-2
-1
1
2
3
4
5
-1
-2
-3
-4
-5
$(x-1)^2+(y-3)^2=4$



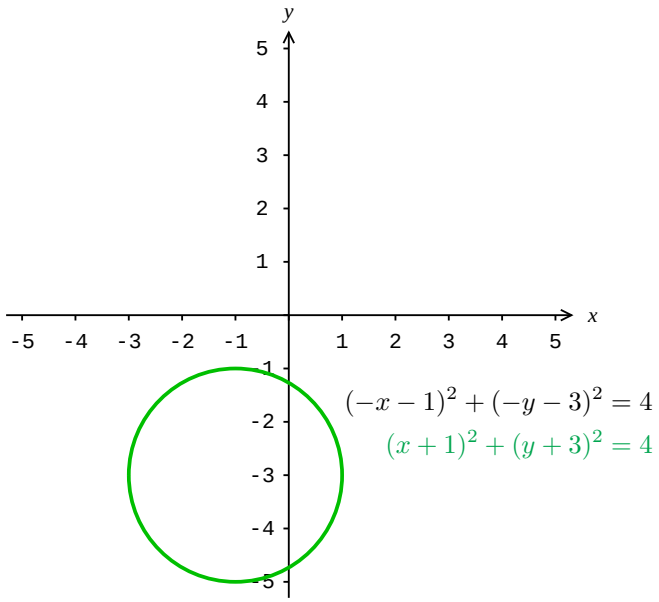
In fact, whenever $E(x, y)$ is an equation in x and y:

- The graph of $E(-x, y)$ is obtained by reflecting the graph of $E(x, y)$ across the y-axis.



In fact, whenever $E(x, y)$ is an equation in x and y:

- The graph of $E(-x, y)$ is obtained by reflecting the graph of $E(x, y)$ across the y-axis.
- The graph of $E(x, -y)$ is obtained by reflecting the graph of $E(x, y)$ across the x-axis.



In fact, whenever $E(x, y)$ is an equation in x and y:

- The graph of $E(-x, y)$ is obtained by reflecting the graph of $E(x, y)$ across the y-axis.
- The graph of $E(x, -y)$ is obtained by reflecting the graph of $E(x, y)$ across the x-axis.
- The graph of $E(-x, -y)$ is obtained by reflecting the graph of $E(x, y)$ through the origin.

Tests for symmetry. The graph of an equation is symmetric ...

... across the y-axis if replacing x by $-x$ results in an equivalent equation.

... across the x-axis if replacing x by $-y$ results in an equivalent equation.

... through the origin if replacing both x by $-x$ and y by $-y$ results in an equivalent equation.