Reflection about $x = 0$ of $f(x, y) = 0$

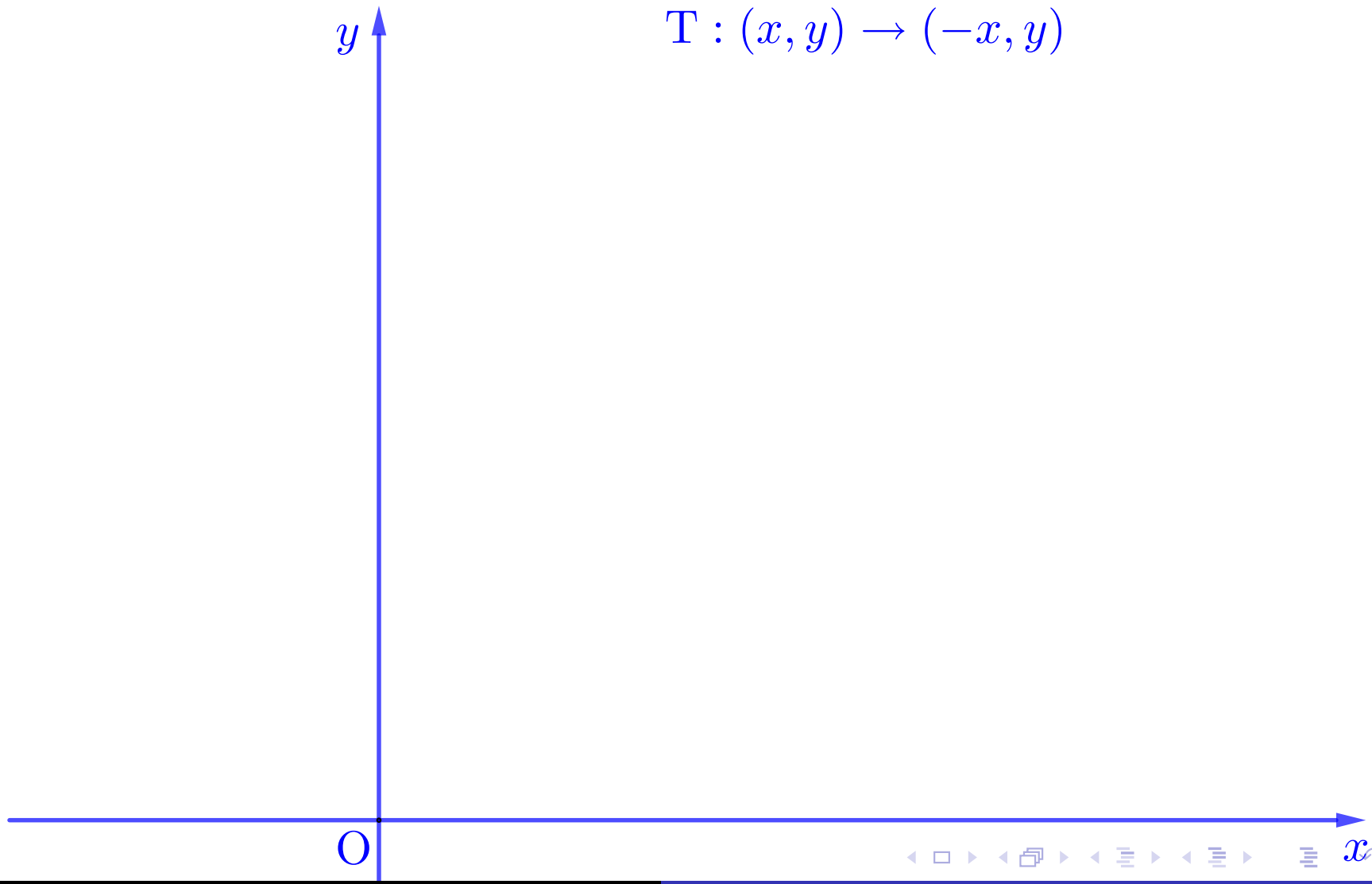
$f(x, y) = 0$의 $x = 0$에 대칭이동
(Reflection about $x = 0$ of $f(x, y) = 0$)

Reflection about $x = 0$ of $f(x, y) = 0$

Start End

Reflection about $x = 0$ of $f(x, y) = 0$

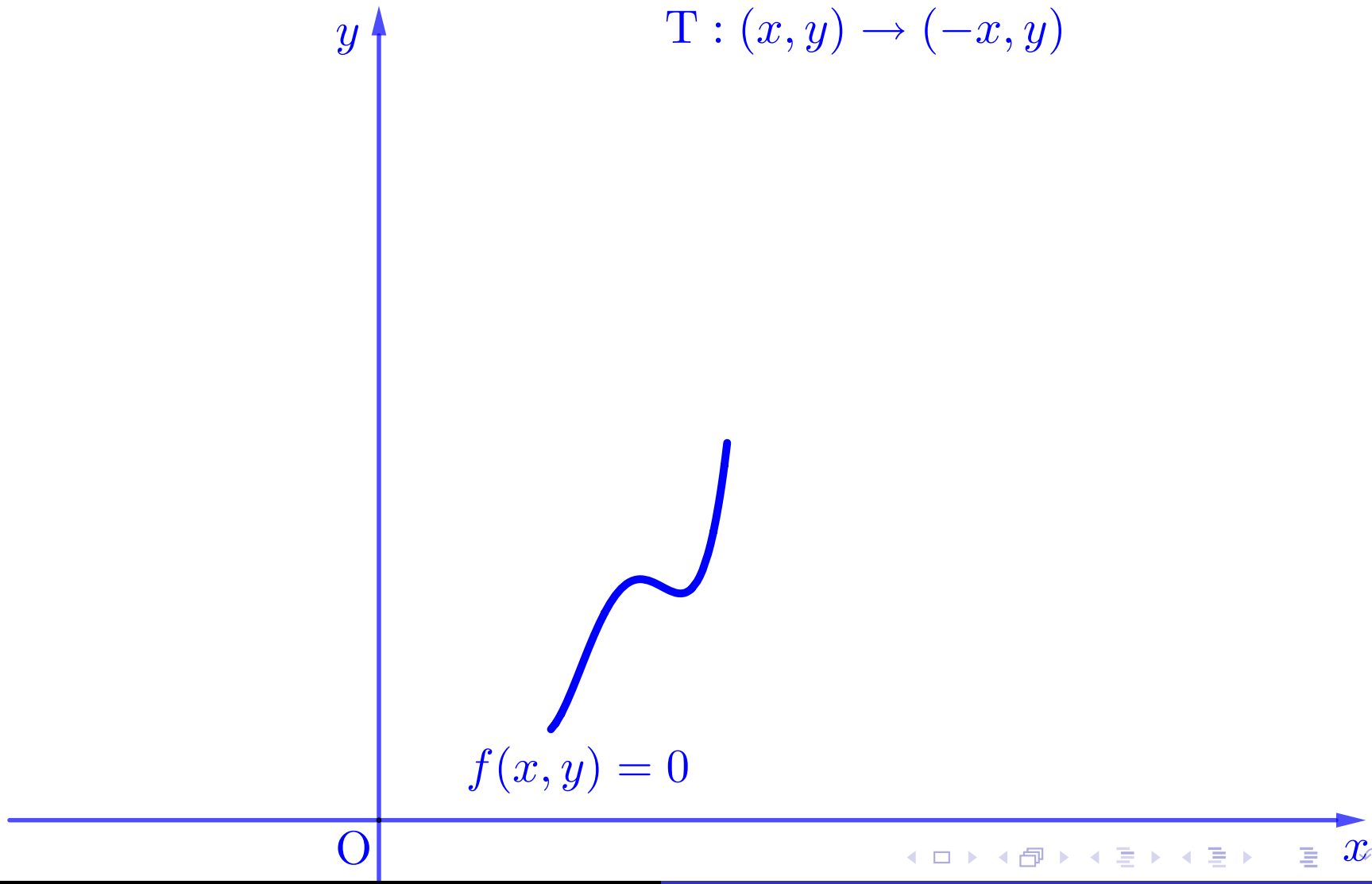
Start End



$$\mathrm{T} : (x, y) \to (-x, y)$$

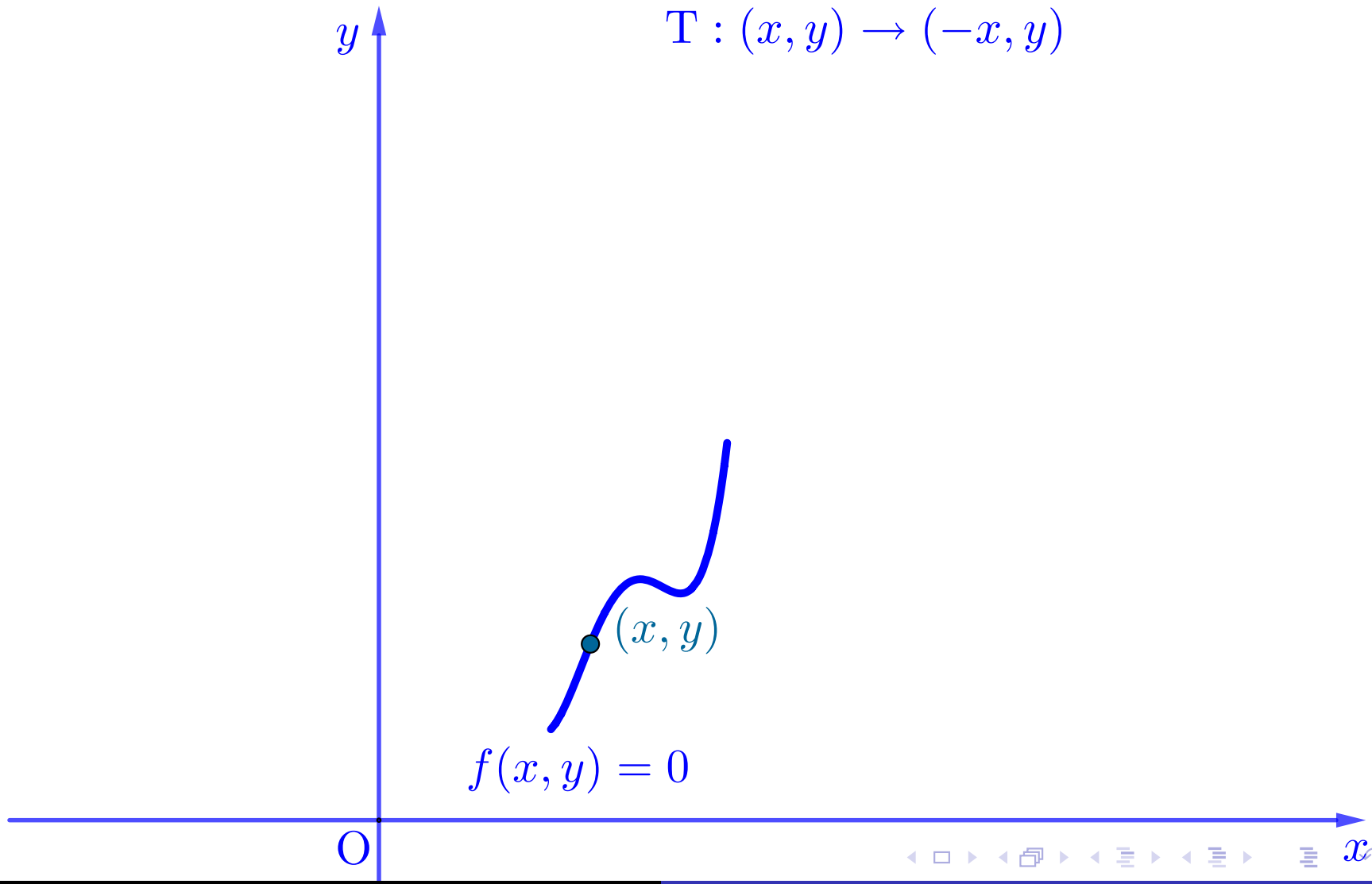
Reflection about $x = 0$ of $f(x, y) = 0$

Start End



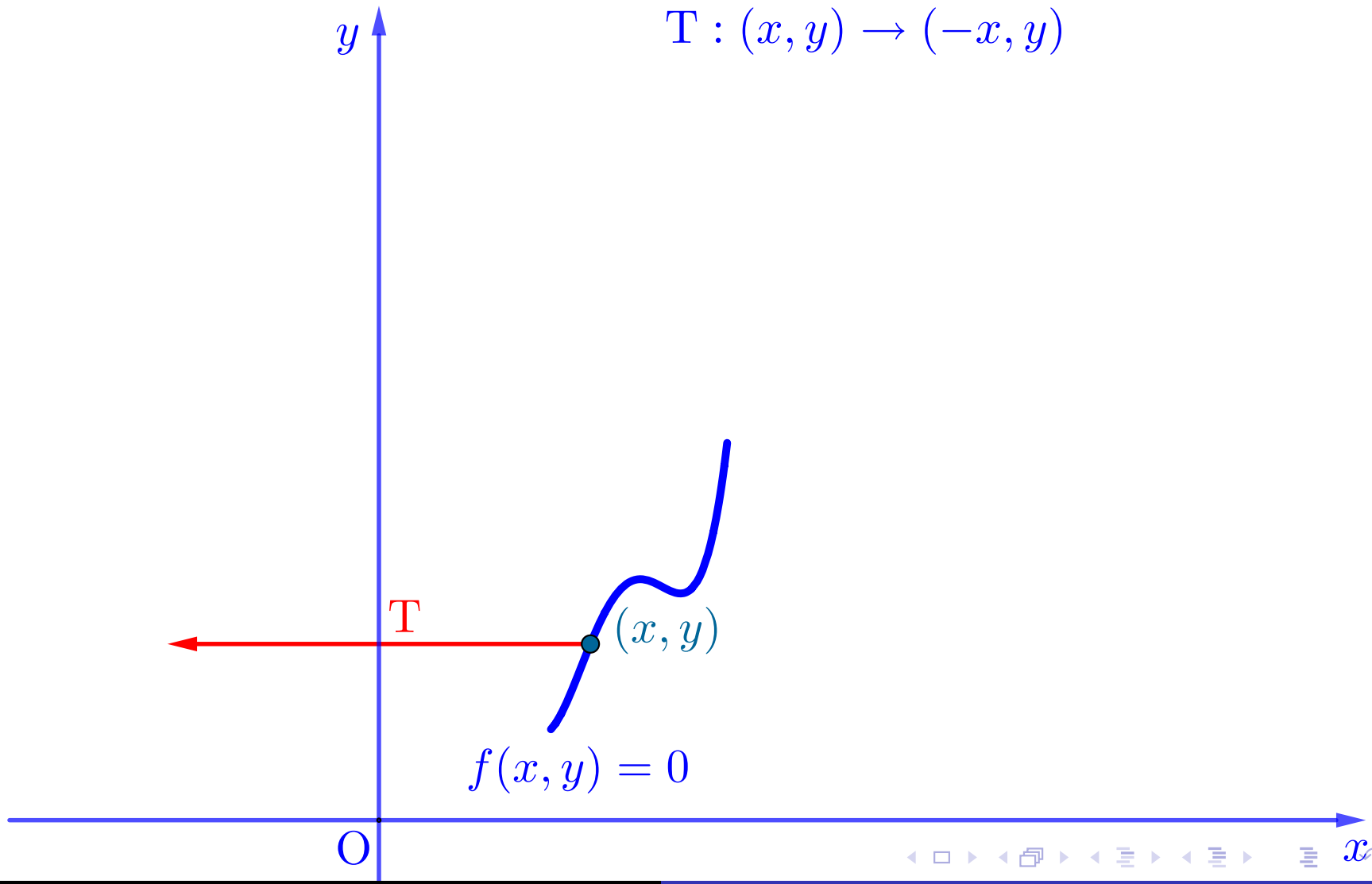
Reflection about $x = 0$ of $f(x, y) = 0$

Start End



Reflection about $x = 0$ of $f(x, y) = 0$

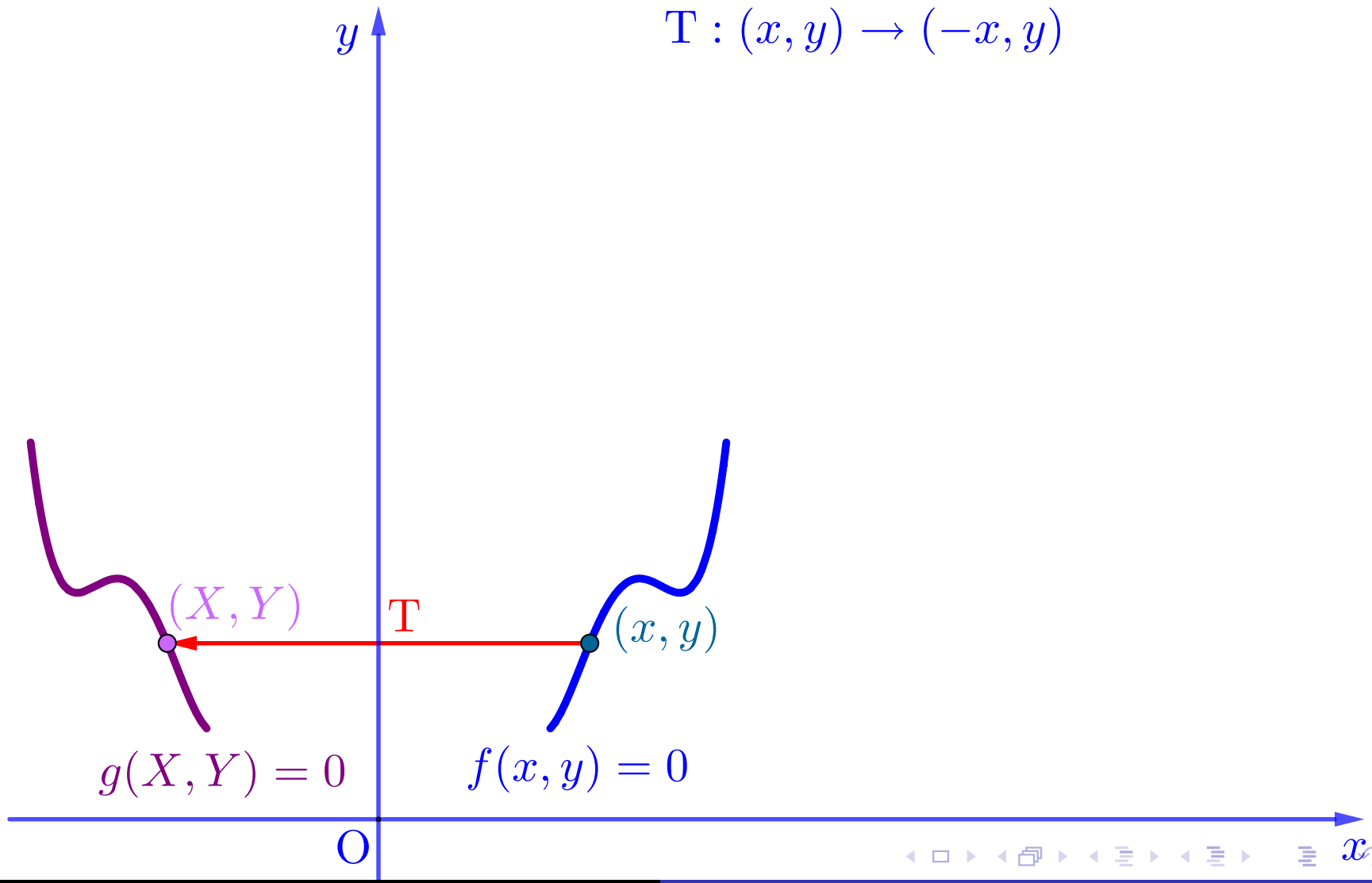
Start End



Reflection about $x = 0$ of $f(x, y) = 0$

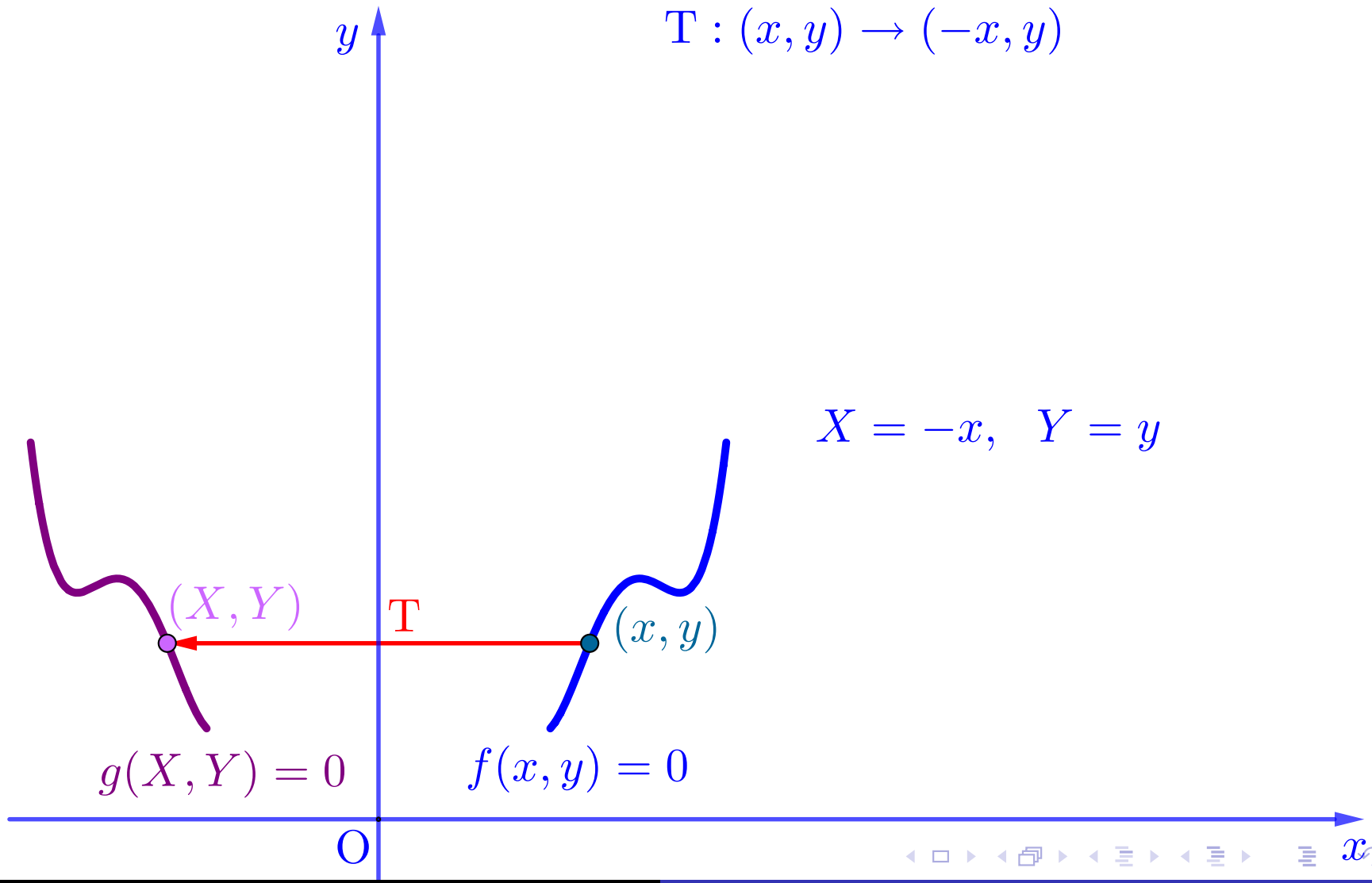
Start End

$\mathrm{T} : (x, y) \to (-x, y)$



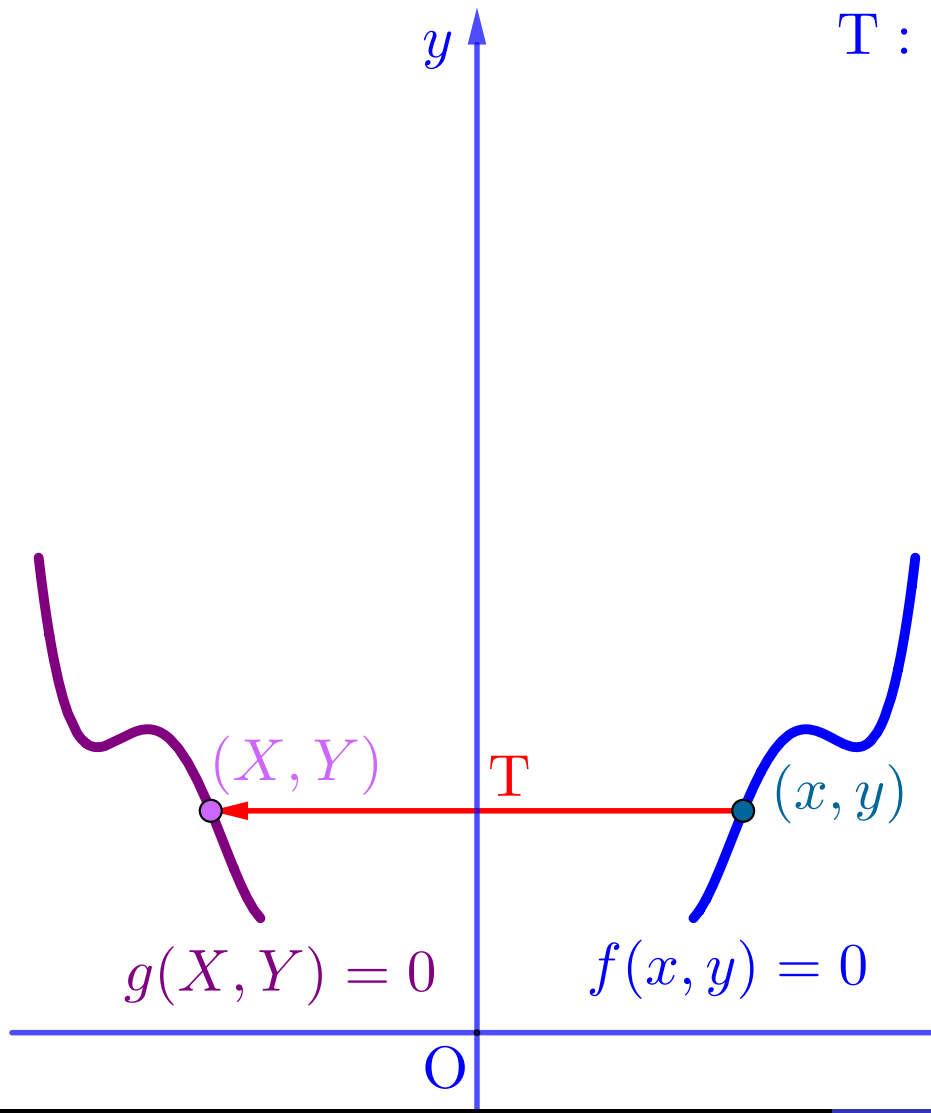
Reflection about $x = 0$ of $f(x, y) = 0$

Start End



Reflection about $x = 0$ of $f(x, y) = 0$

Start End

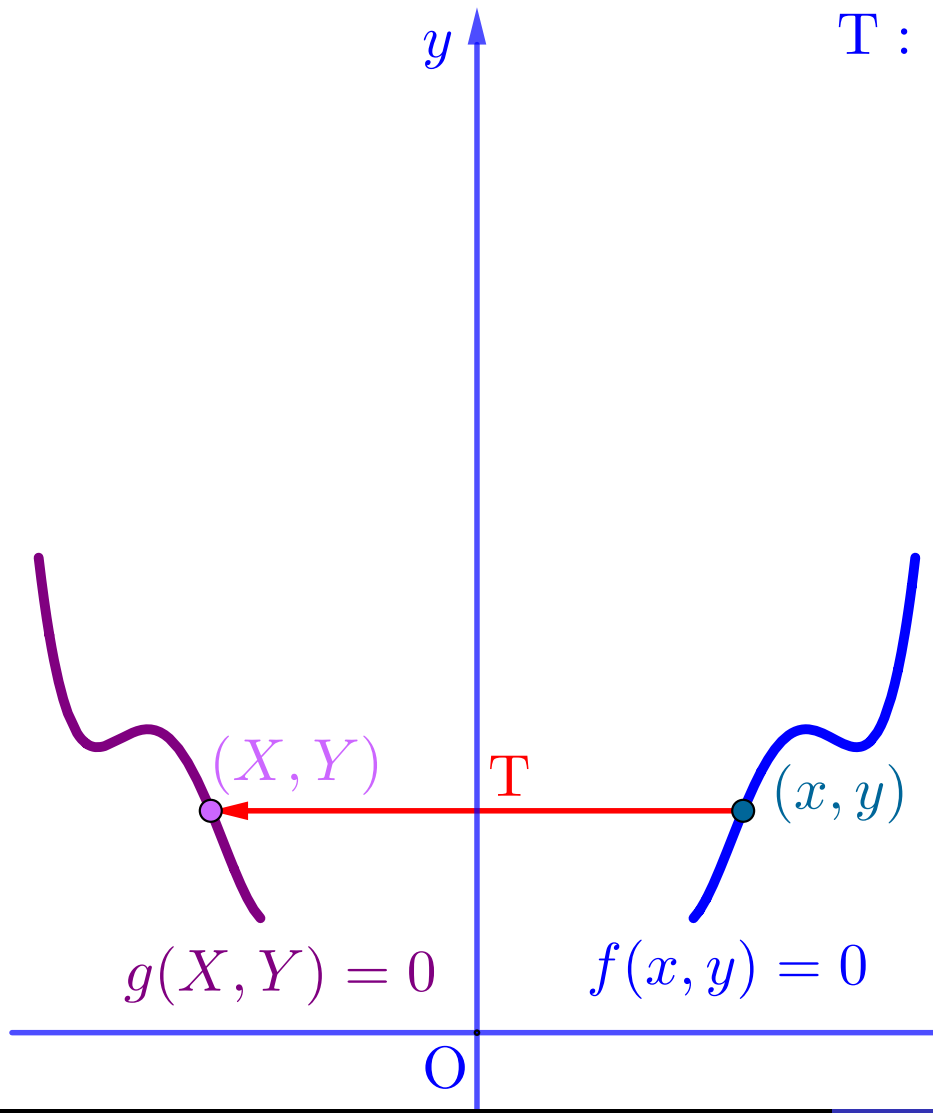


$$\mathrm{T} : (x, y) \to (-x, y)$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End

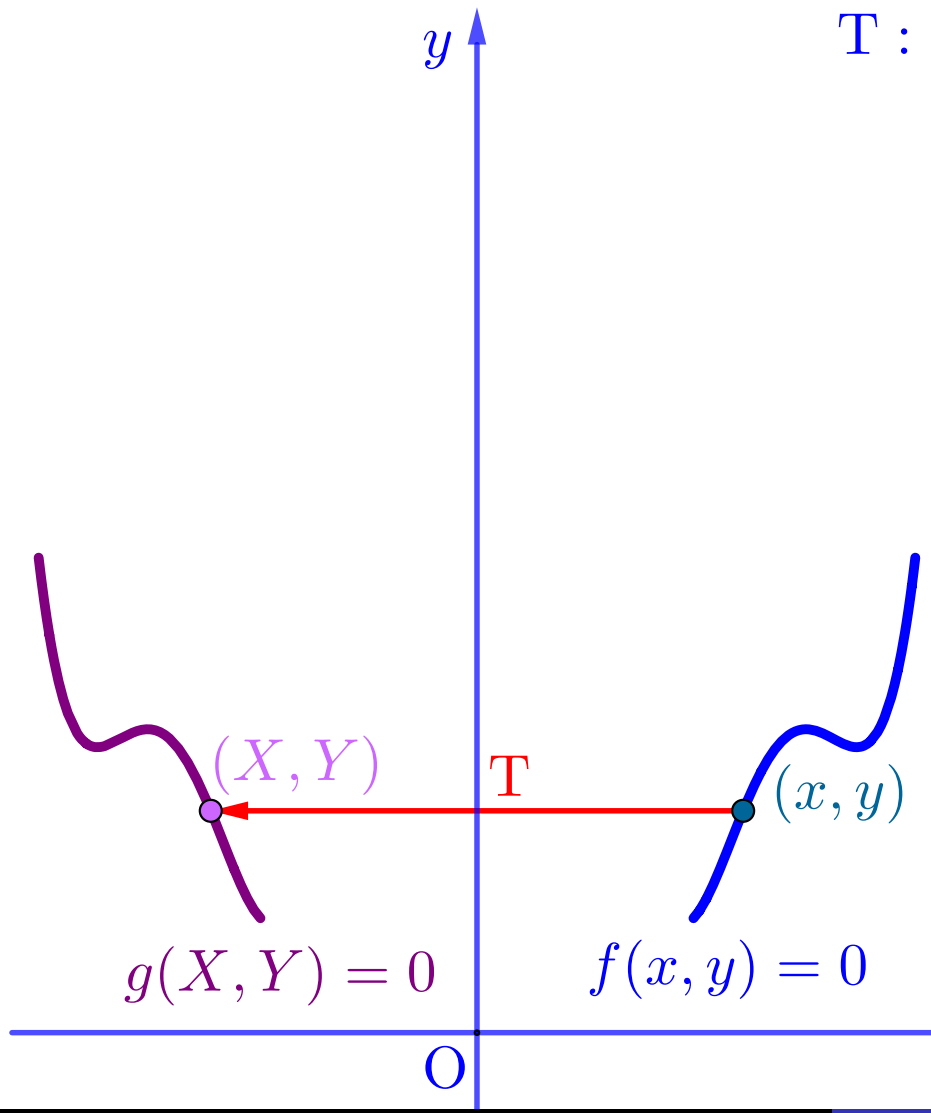


$$\mathrm{T} : (x, y) \to (-x, y)$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$
$$f(x, y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End

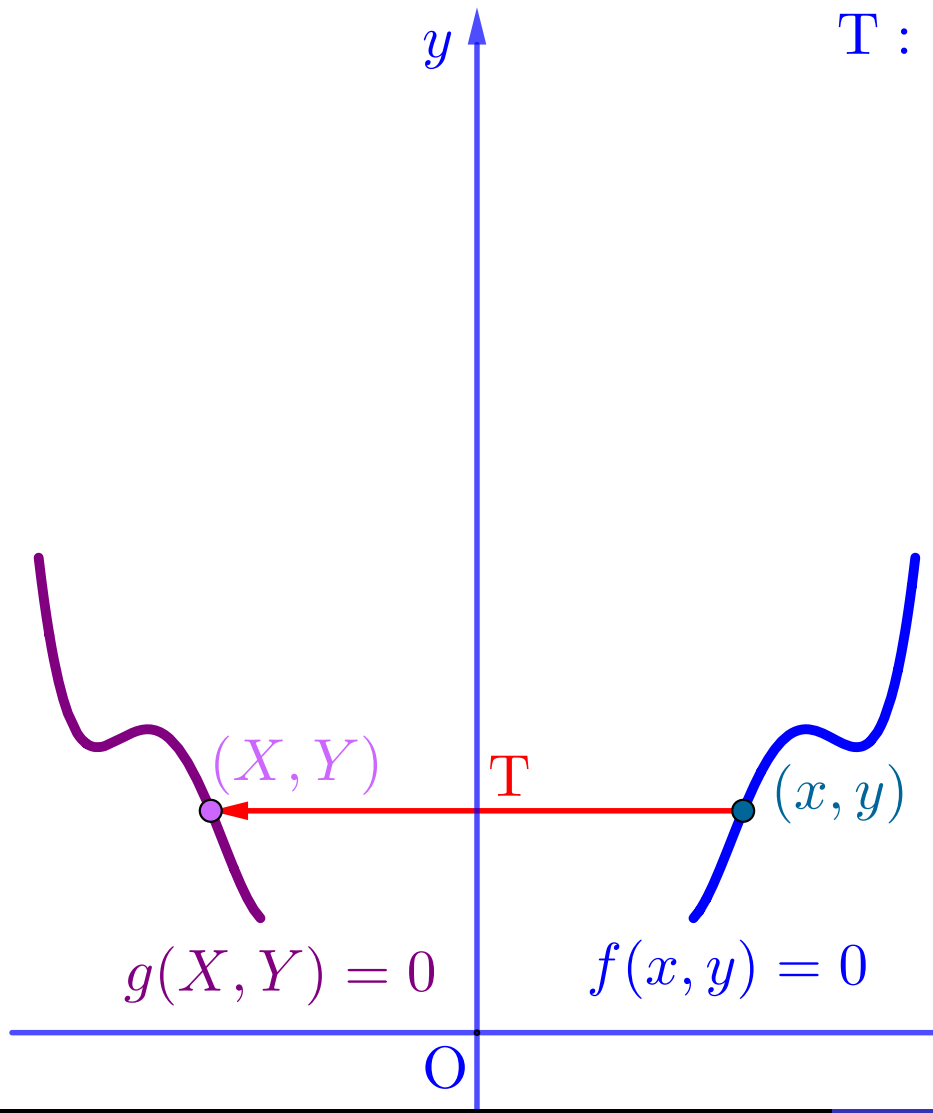


$$\mathrm{T} : (x, y) \to (-x, y)$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$
$$f(x, y) = f(-X, Y)$$
$$f(-X, Y) = 0$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End



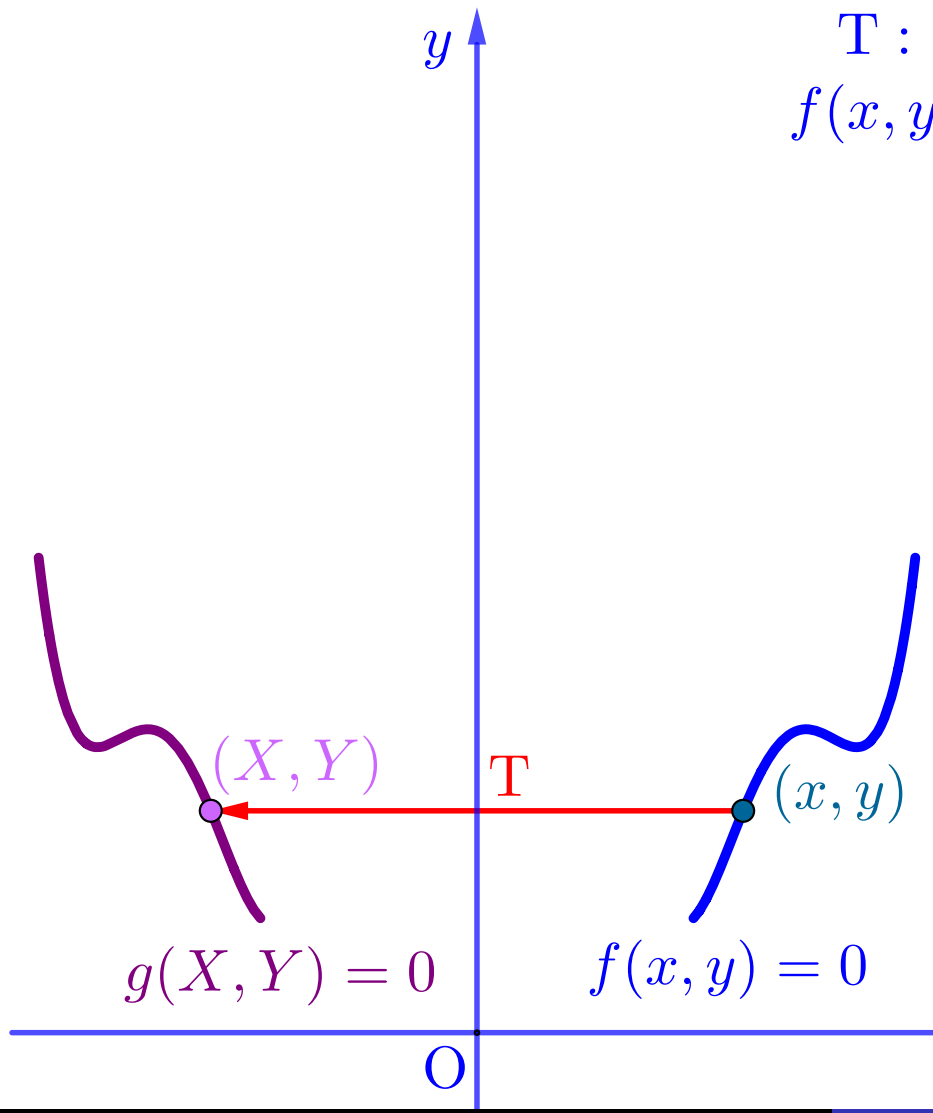
$$\mathrm{T} : (x, y) \to (-x, y)$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$

$$f(x, y) = f(-X, Y)$$
$$f(-X, Y) = 0$$
$$\therefore g(X, Y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End



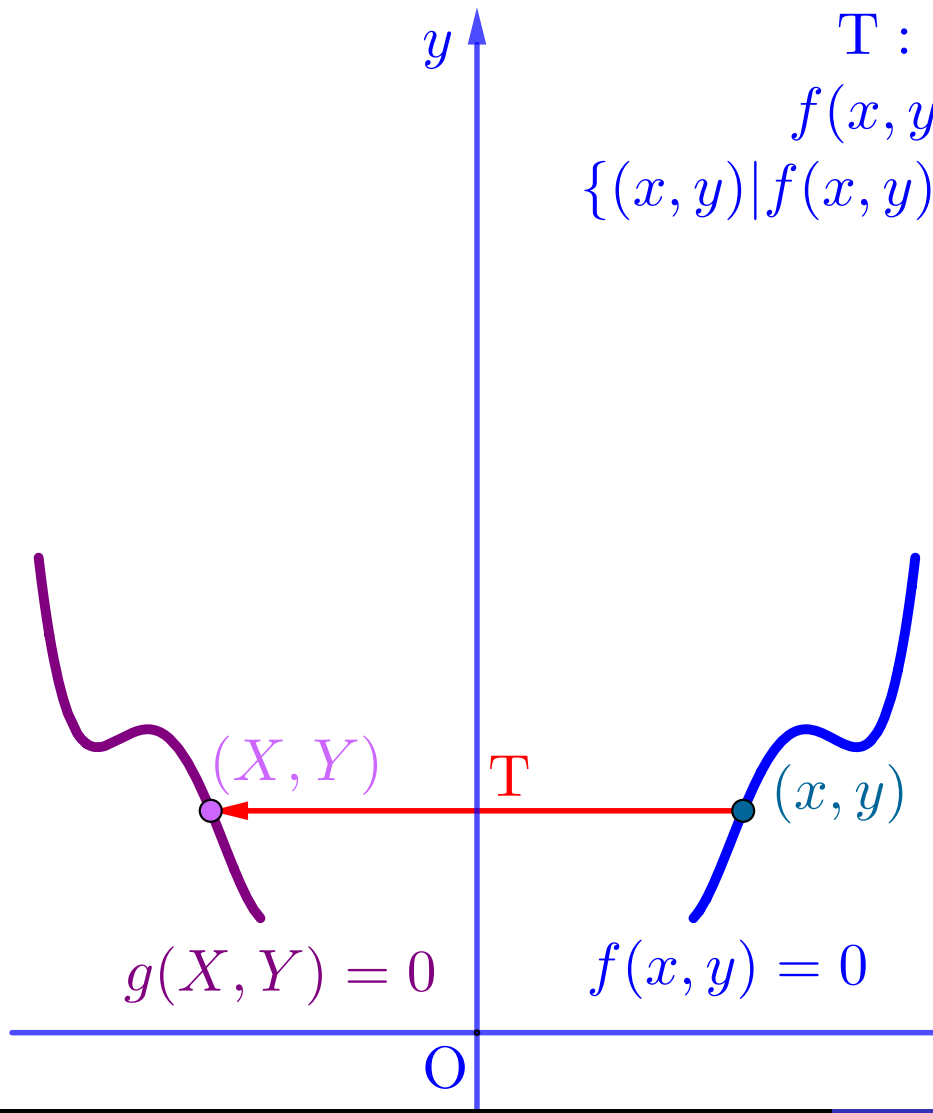
$$\mathrm{T} : (x, y) \to (-x, y)$$
$$f(x, y) = 0 \to g(x, y) = 0$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$
$$f(x, y) = f(-X, Y)$$
$$f(-X, Y) = 0$$
$$\therefore g(X, Y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End

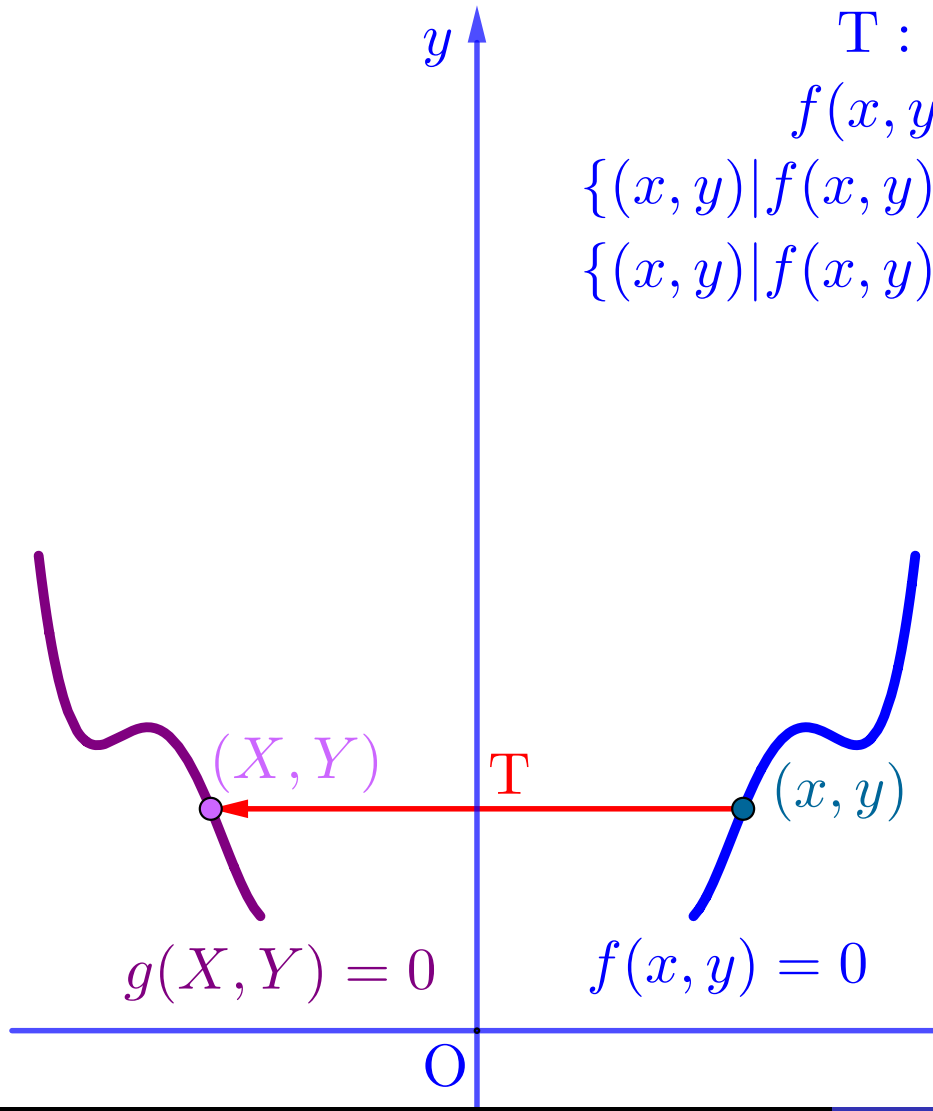
$$\mathrm{T} : (x, y) \to (-x, y)$$
$$f(x, y) = 0 \to g(x, y) = 0$$
$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | g(x, y) = 0\}$$



$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$
$$f(x, y) = f(-X, Y)$$
$$f(-X, Y) = 0$$
$$\therefore g(X, Y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End

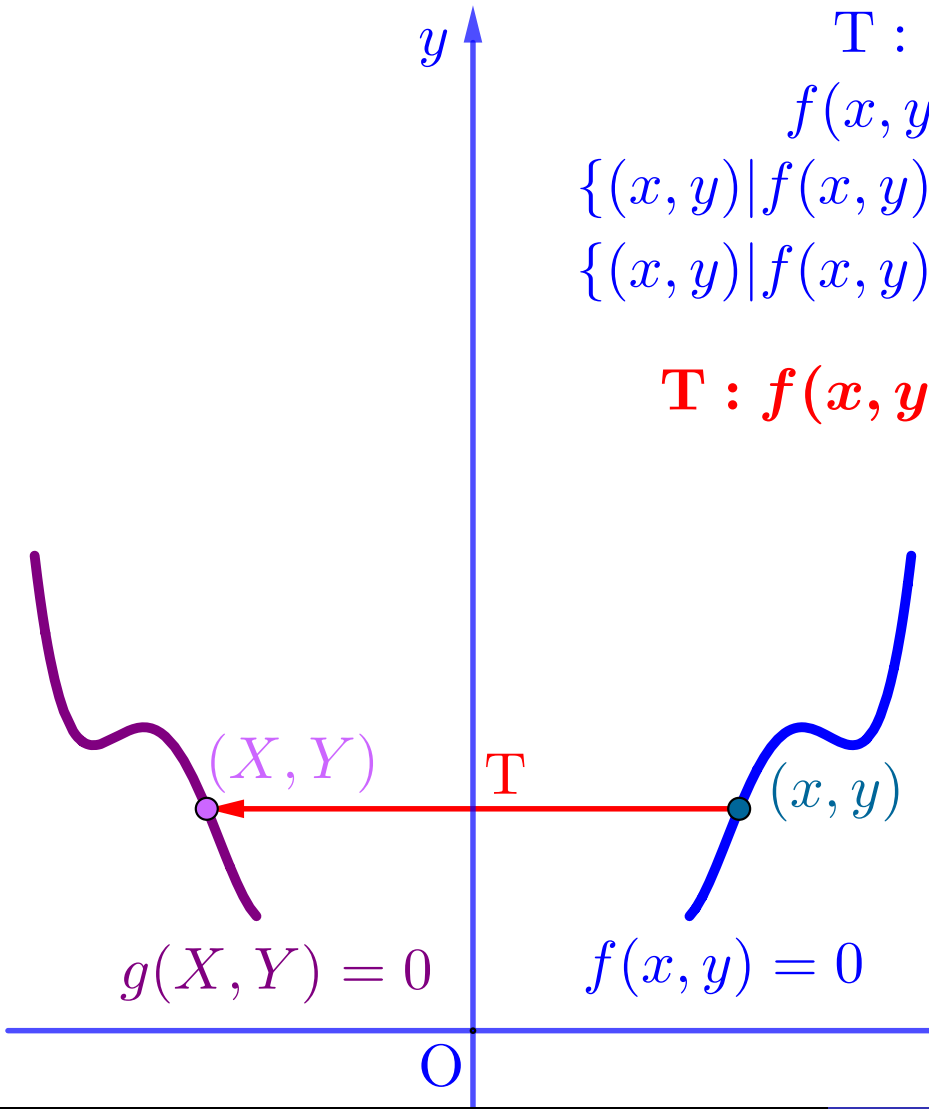


$$\mathrm{T} : (x, y) \to (-x, y)$$
$$f(x, y) = 0 \to g(x, y) = 0$$
$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | g(x, y) = 0\}$$
$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | f(-x, y) = 0\}$$

$$X = -x, \quad Y = y$$
$$x = -X, \quad y = Y$$
$$f(x, y) = f(-X, Y)$$
$$f(-X, Y) = 0$$
$$\therefore g(X, Y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Start End



$$\mathrm{T} : (x, y) \to (-x, y)$$

$$f(x, y) = 0 \to g(x, y) = 0$$

$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | g(x, y) = 0\}$$

$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | f(-x, y) = 0\}$$

$$\mathbf{T : f(x, y) = 0 \to f(-x, y) = 0}$$

$$X = -x, \quad Y = y$$

$$x = -X, \quad y = Y$$

$$f(x, y) = f(-X, Y)$$

$$f(-X, Y) = 0$$

$$\therefore g(X, Y) = f(-X, Y)$$

Reflection about $x = 0$ of $f(x, y) = 0$

Github:
https://min7014.github.io/math20200304004.html

Click or paste URL into the URL search bar,
and you can see a picture moving.