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

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

Start End

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

Start End

$y = b$

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

Start End

$$\mathrm{T} : (x, y) \rightarrow (x, 2b - y)$$

$y = b$

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

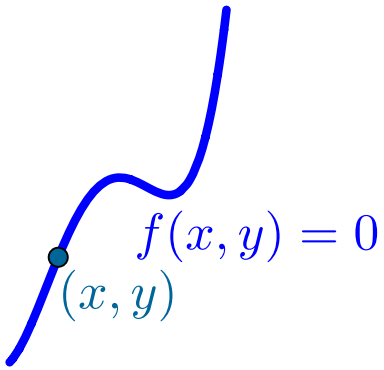
Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

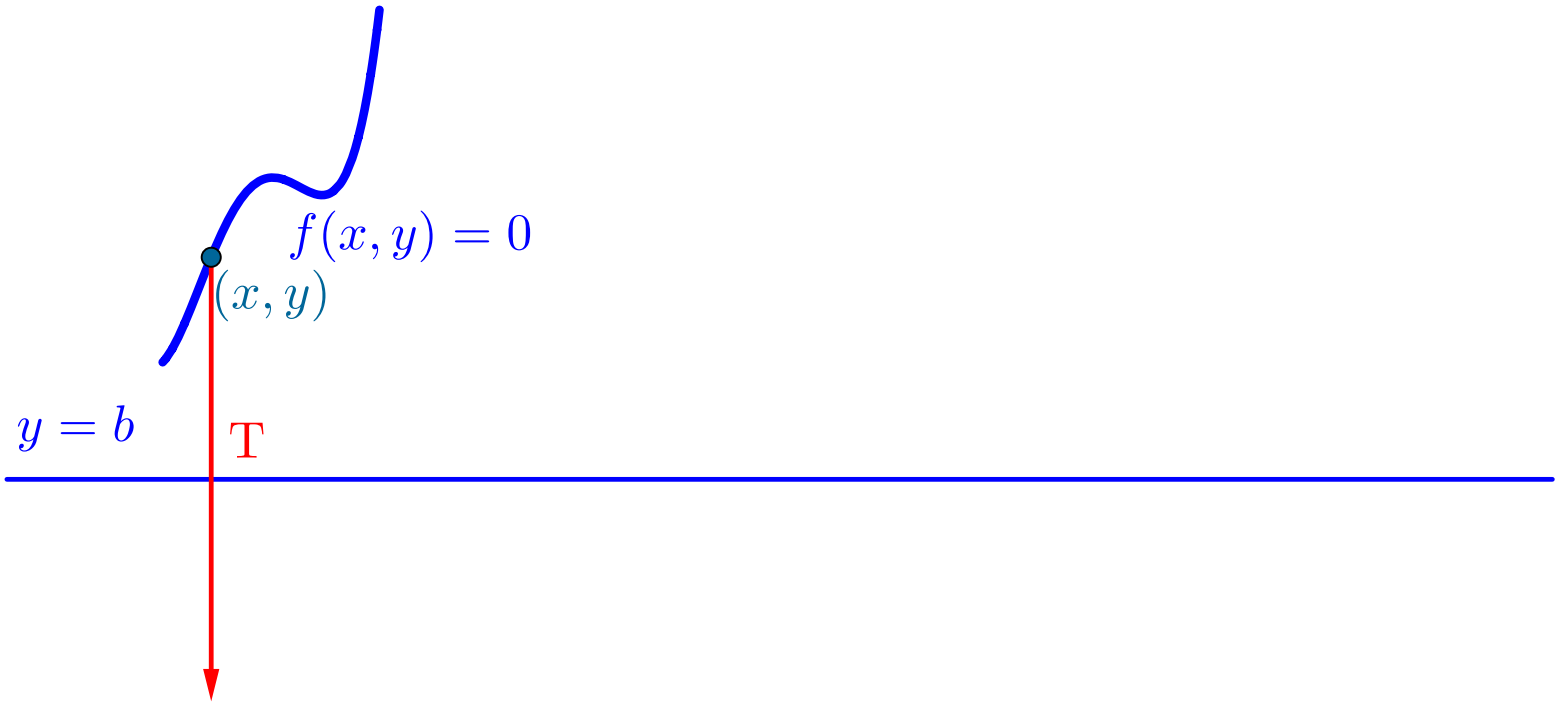


$y = b$

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

Start End

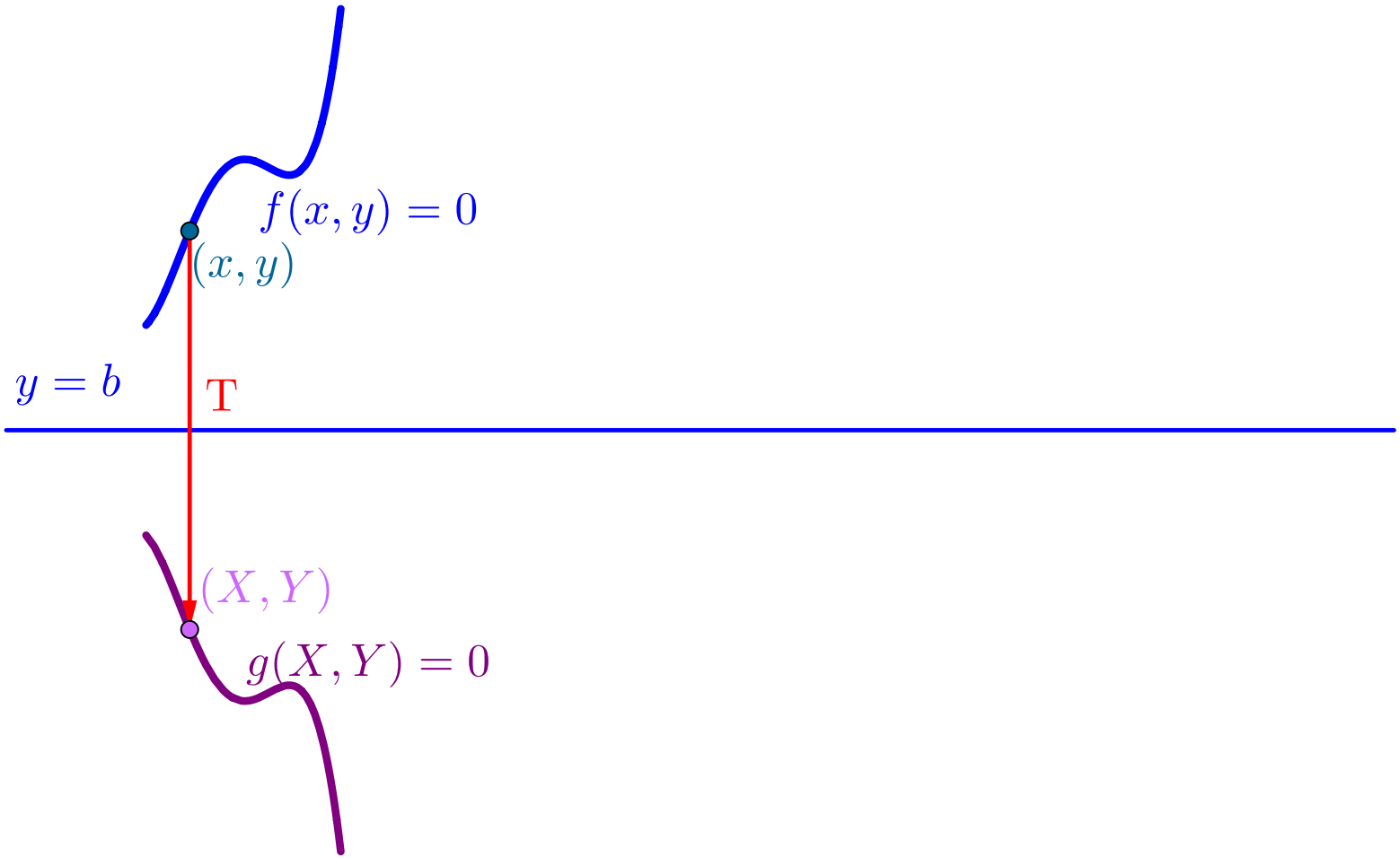
$$\mathrm{T} : (x, y) \to (x, 2b - y)$$



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

Start End

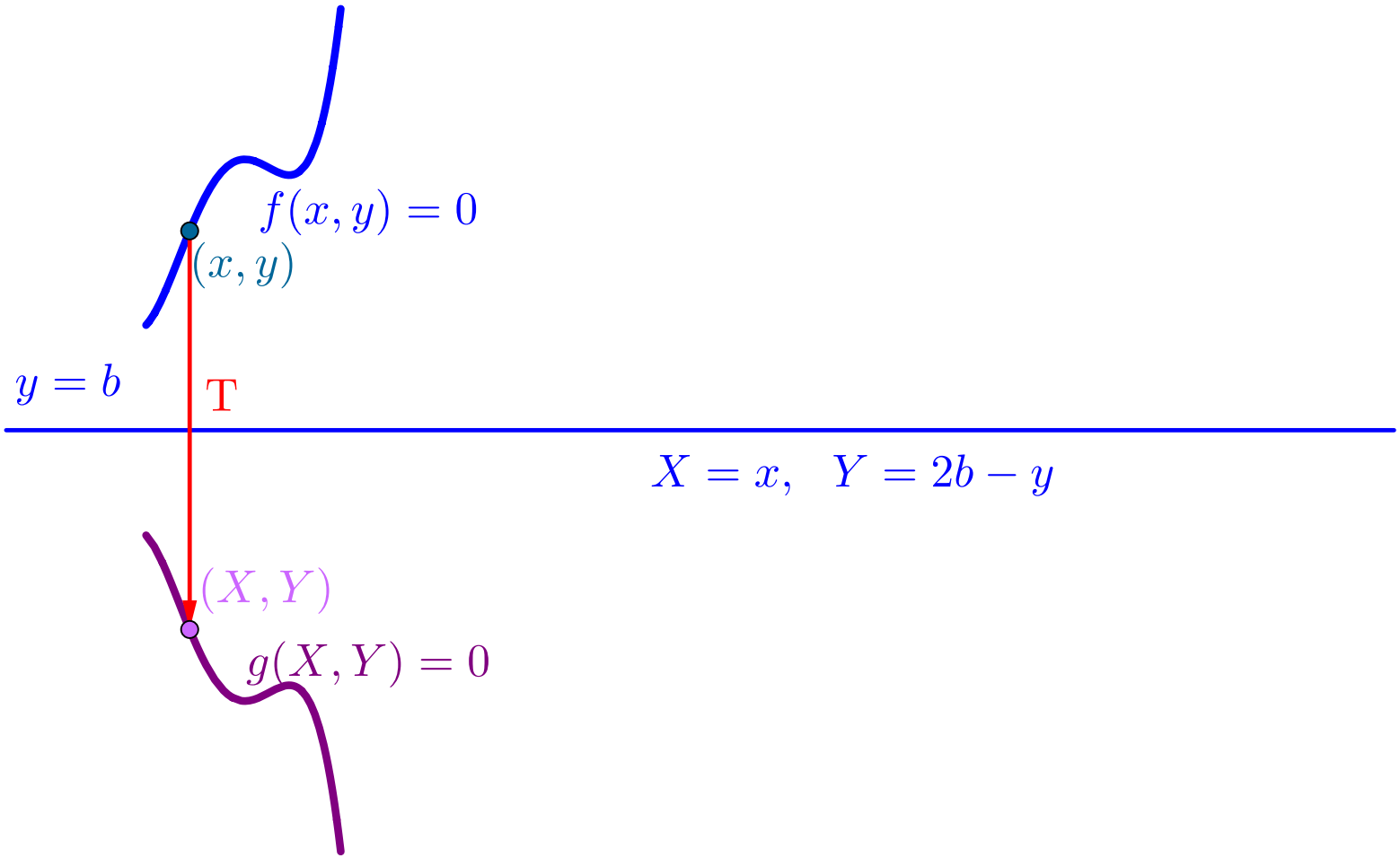
$$\mathrm{T} : (x, y) \to (x, 2b - y)$$



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

Start End

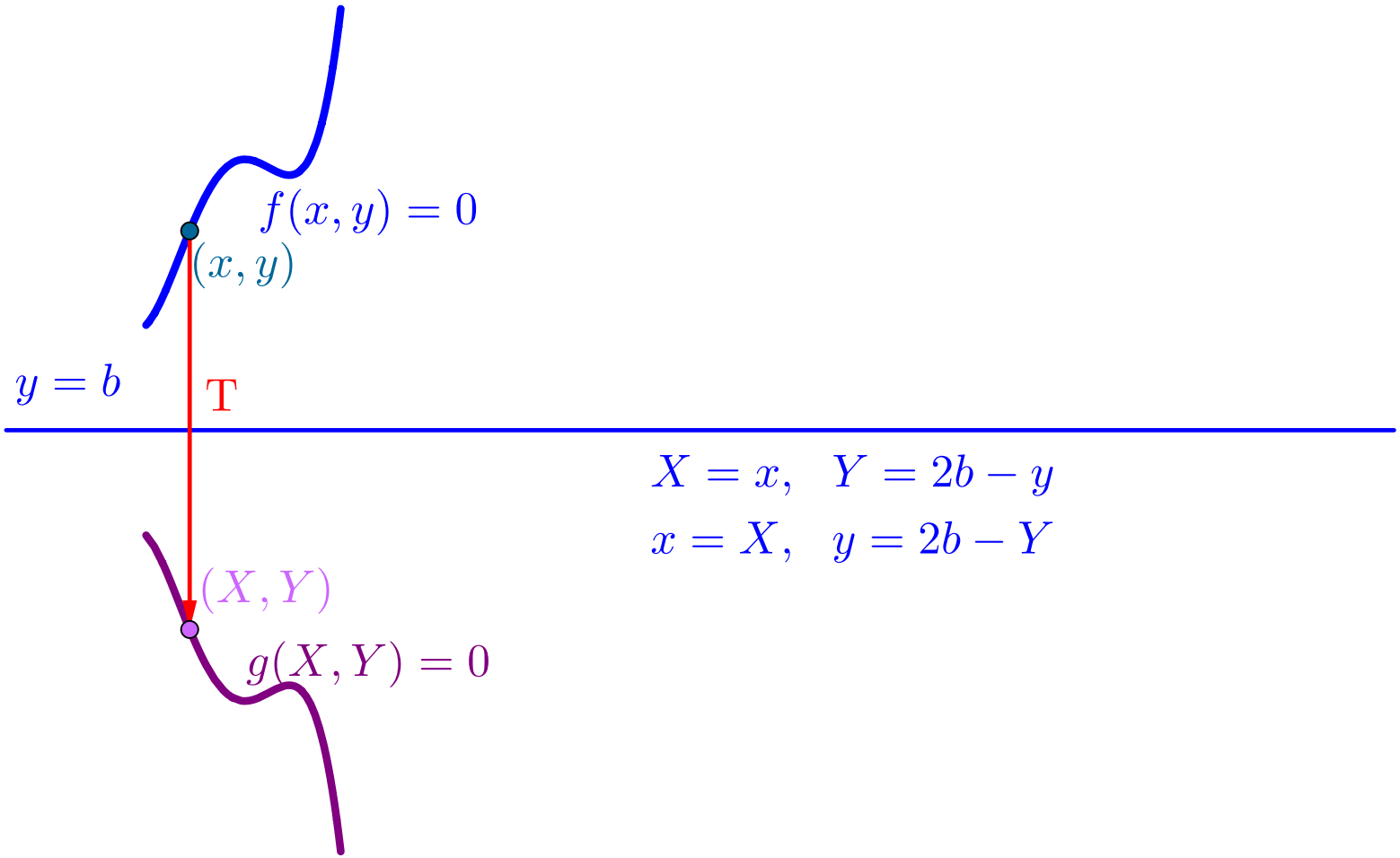
$$\mathrm{T} : (x, y) \to (x, 2b - y)$$



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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

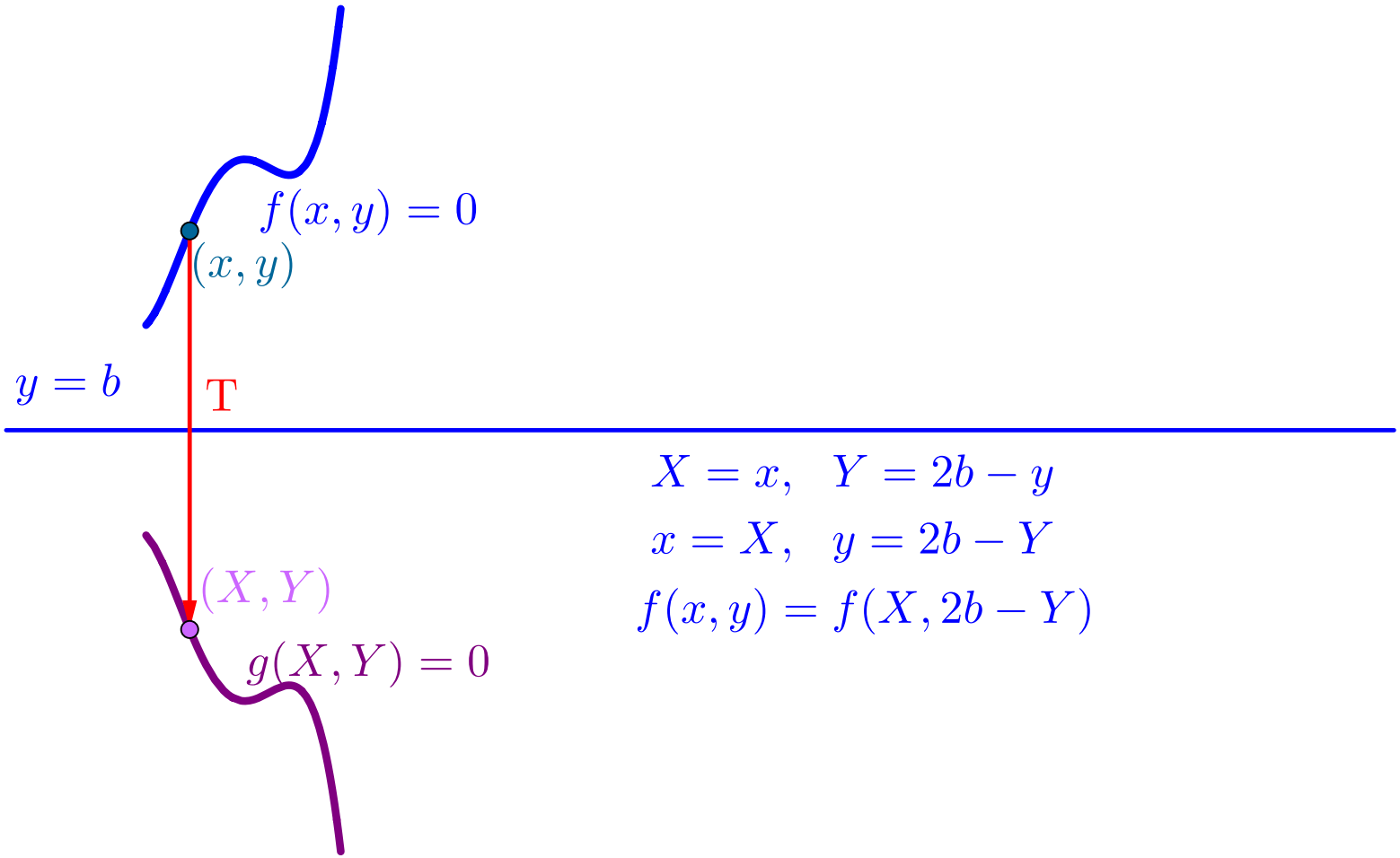


$$X = x, \quad Y = 2b - y$$
$$x = X, \quad y = 2b - Y$$

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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

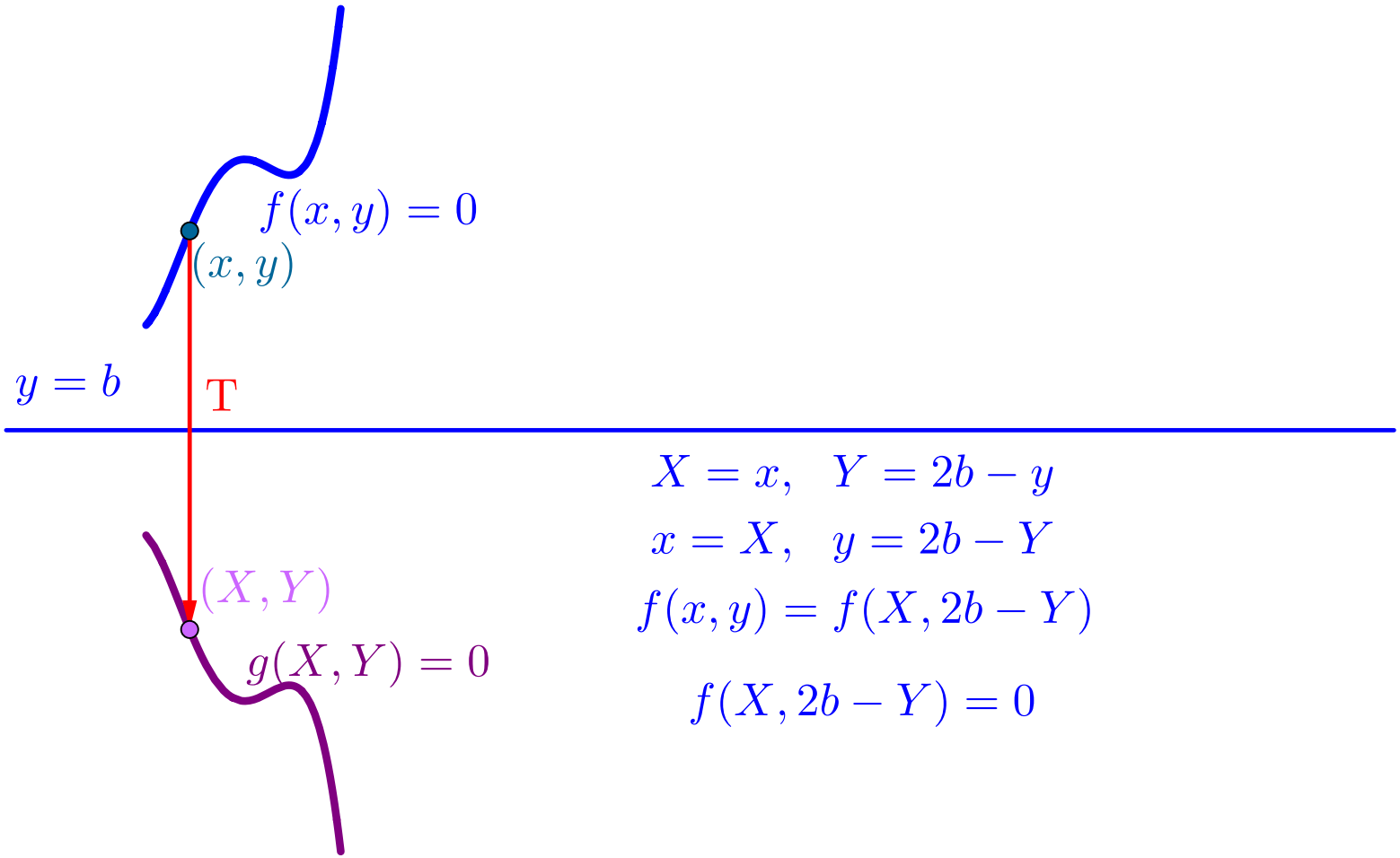


$$X = x, \quad Y = 2b - y$$
$$x = X, \quad y = 2b - Y$$
$$f(x, y) = f(X, 2b - Y)$$

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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$



$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

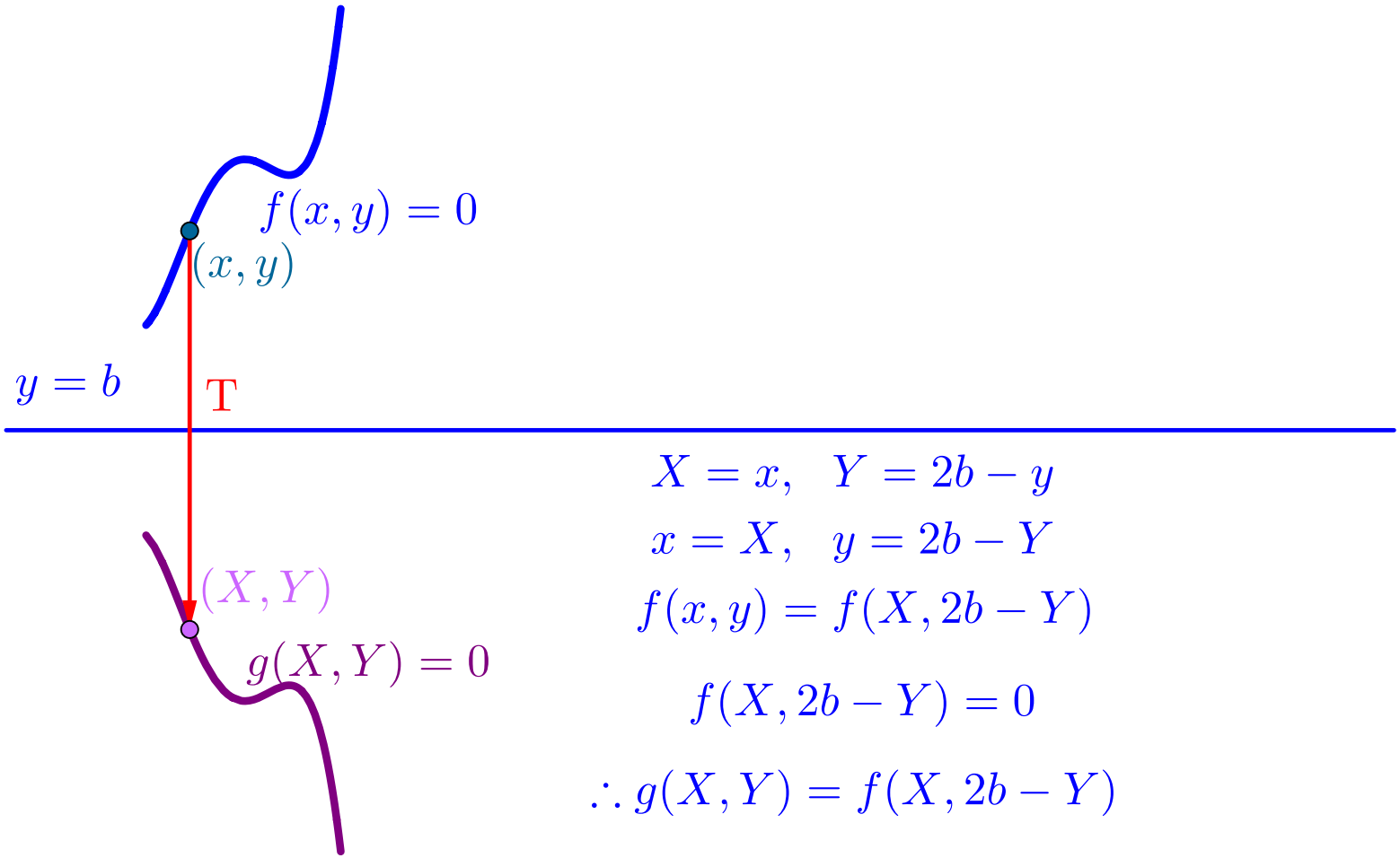
$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$



$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

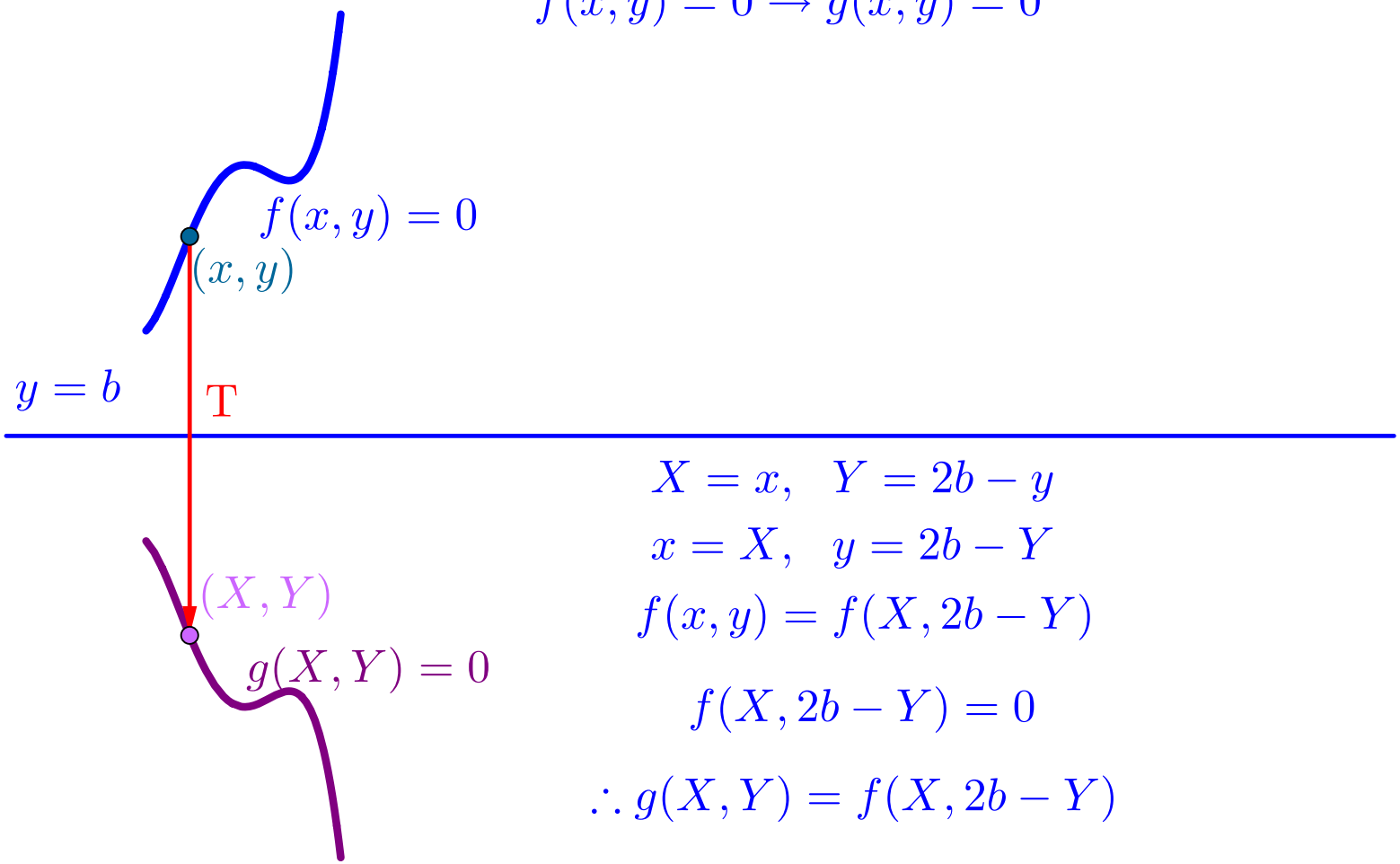
$$\therefore g(X, Y) = f(X, 2b - Y)$$

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

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

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



$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

$$\therefore g(X, Y) = f(X, 2b - Y)$$

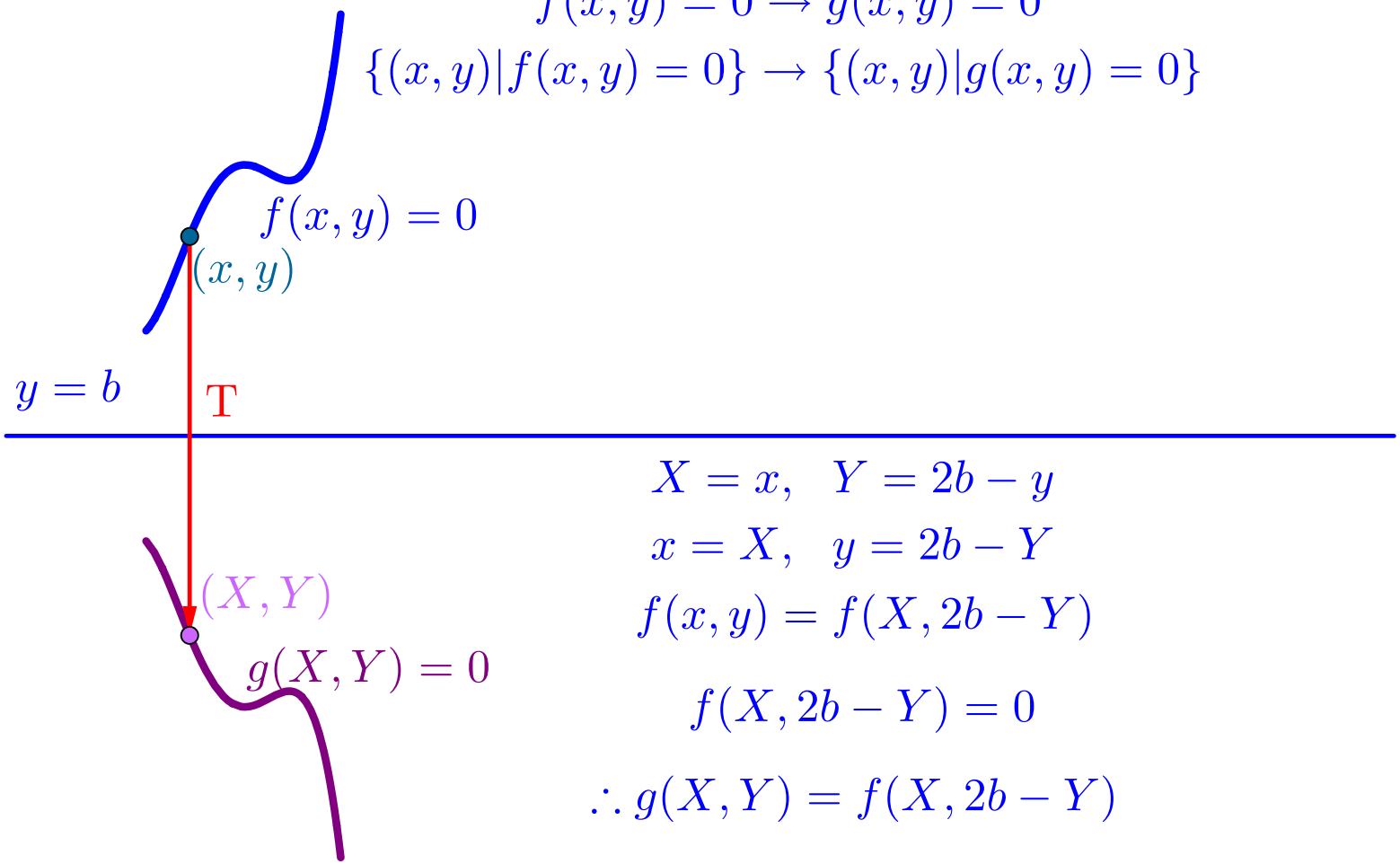
Reflection about $y = b$ of $f(x, y) = 0$

Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

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

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



$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

$$\therefore g(X, Y) = f(X, 2b - Y)$$

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

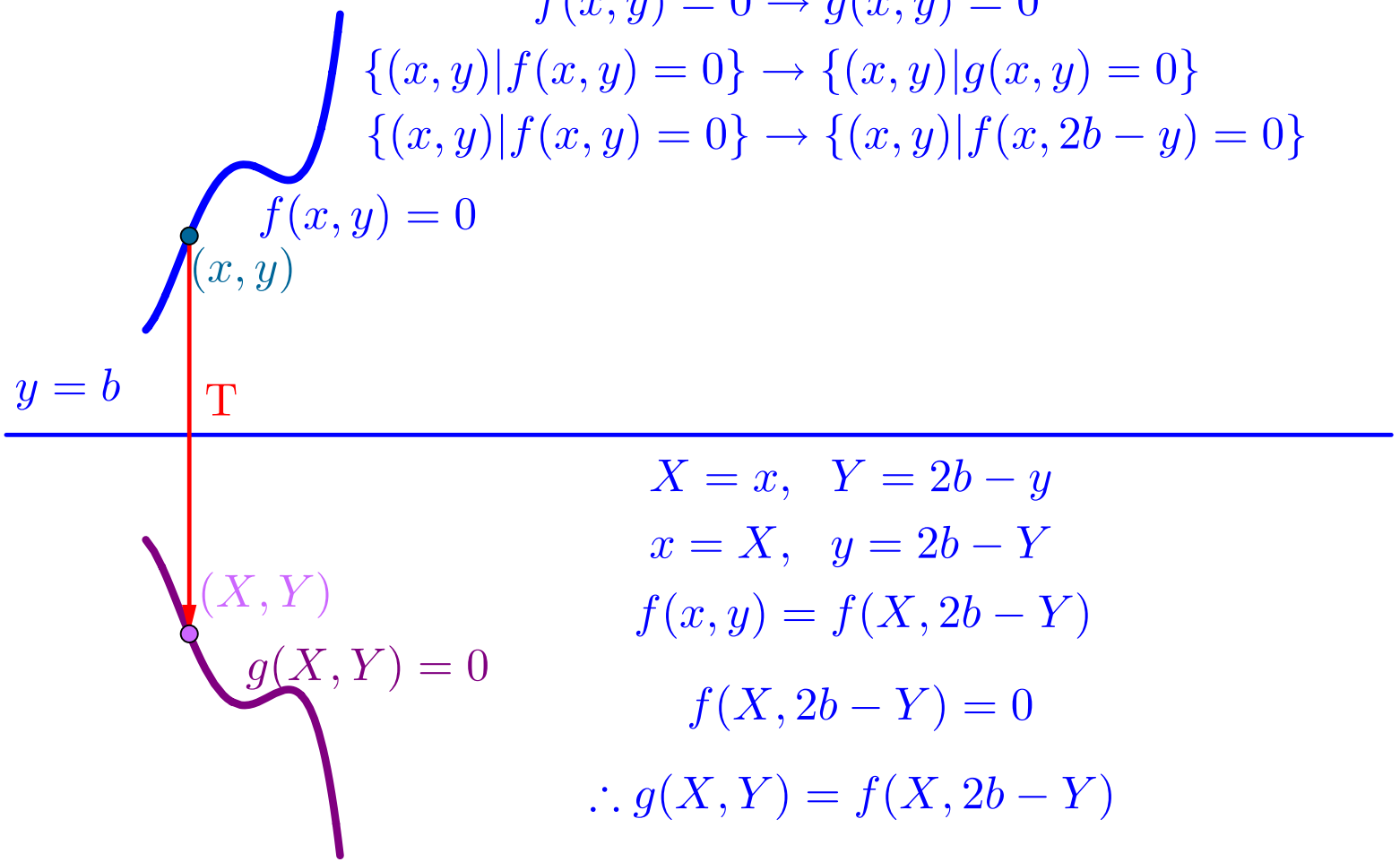
Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

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

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

$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | f(x, 2b - y) = 0\}$$



$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

$$\therefore g(X, Y) = f(X, 2b - Y)$$

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

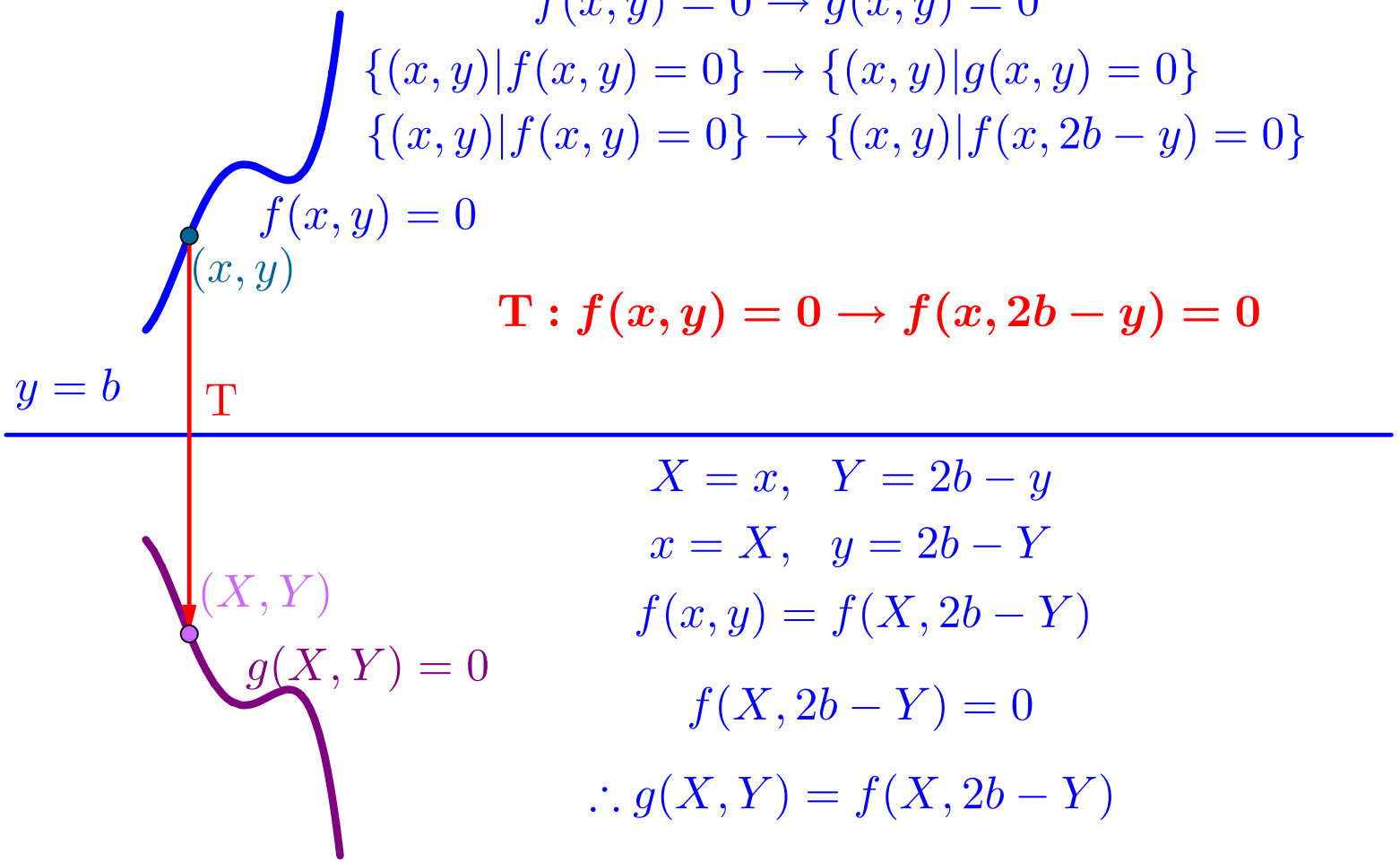
Start End

$$\mathrm{T} : (x, y) \to (x, 2b - y)$$

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

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

$$\{(x, y) | f(x, y) = 0\} \to \{(x, y) | f(x, 2b - y) = 0\}$$



$$\mathbf{T} : \boldsymbol{f(x, y) = 0 \to f(x, 2b - y) = 0}$$

$$X = x, \quad Y = 2b - y$$

$$x = X, \quad y = 2b - Y$$

$$f(x, y) = f(X, 2b - Y)$$

$$f(X, 2b - Y) = 0$$

$$\therefore g(X, Y) = f(X, 2b - Y)$$

Github:
https://min7014.github.io/math20211025001.html

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