

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

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

▶ Start

▶ End

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

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• (a, b)

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

▶ Start

▶ End

$$T : (x, y) \rightarrow (2a - x, 2b - y)$$

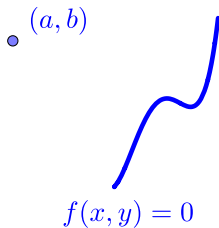
● (a, b)

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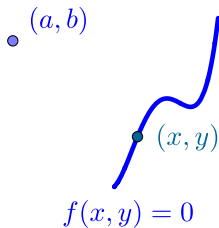


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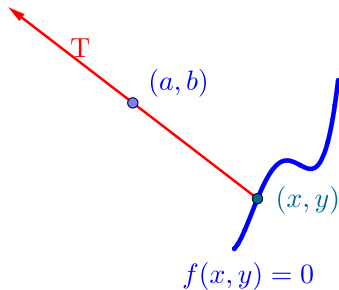


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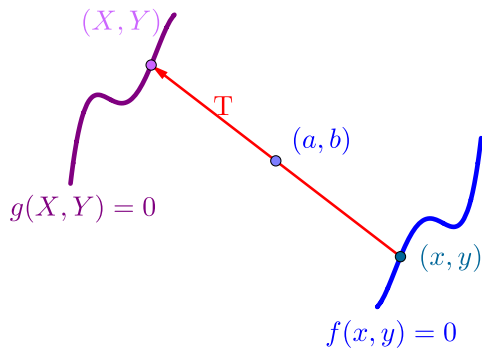


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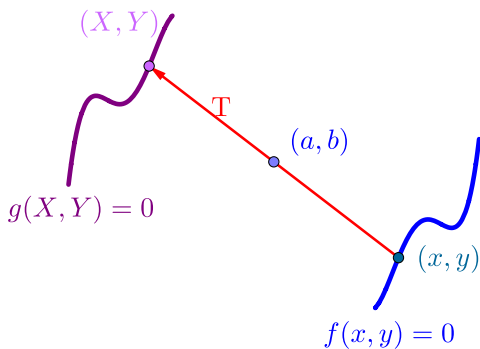


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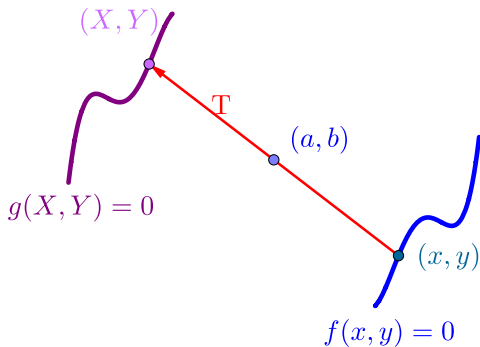
$$X = 2a - x, \quad Y = 2b - y$$

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

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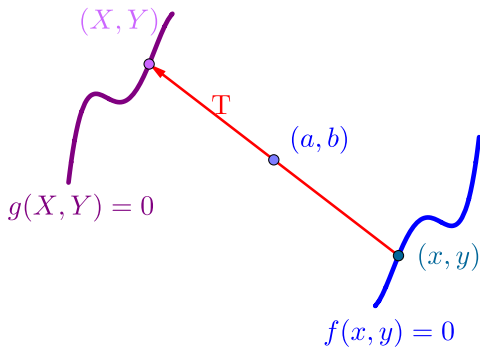
$$\begin{aligned} X &= 2a - x, & Y &= 2b - y \\ x &= 2a - X, & y &= 2b - Y \\ f(x, y) &= f(2a - X, 2b - Y) \\ f(2a - X, 2b - Y) &= 0 \end{aligned}$$

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

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$$T : (x, y) \rightarrow (2a - x, 2b - y)$$



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

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

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

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

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

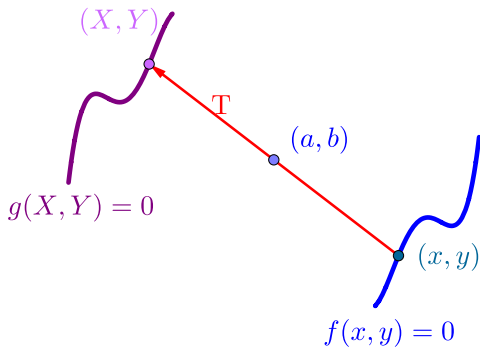
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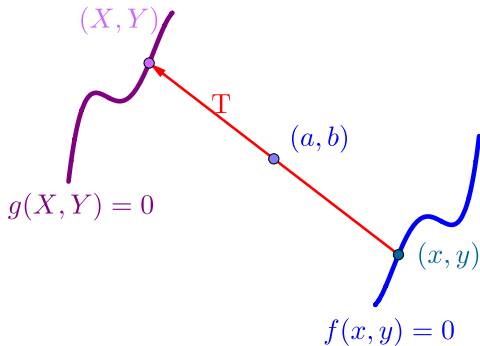
▶ Start

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$$T : (x, y) \rightarrow (2a - x, 2b - y)$$

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

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



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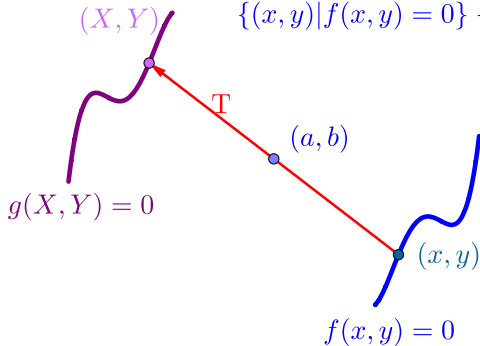
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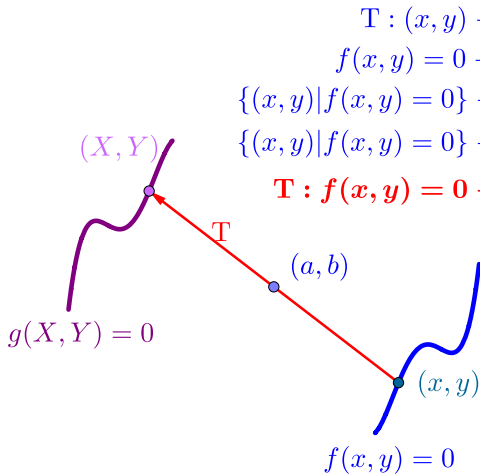
$$f(2a - X, 2b - Y) = 0$$

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Github:

<https://min7014.github.io/math20211027001.html>

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