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algebraic map

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A map $f : X \rightarrow Y$ between quasi-affine varieties $X \subset k^n, Y \subset k^m$ over a field k is called *algebraic* if there is a map $f' : k^n \rightarrow k^m$ whose component functions are polynomials, such that f' restricts to f on X .

Alternatively, f is algebraic if the pullback map $f^* : C(Y) \rightarrow C(X)$ maps the coordinate ring of Y , $k[Y]$, to the coordinate ring of X , $k[X]$.