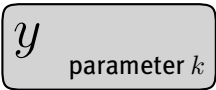


3-Coloring



Quadratic equations over 0/1-variables



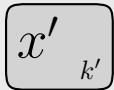
$\longleftrightarrow$   
 $n$  bits

Poly-  
time  $\longrightarrow$



$\longleftrightarrow$   
 $\text{poly}(n)$

Kernel  $\longrightarrow$



$\longleftrightarrow$   
 $f(g(k))$

Given: a kernel for problem  $X$