$a=4 \quad k=2 \quad p=0$

$b=2 \quad f(n)=n^2$

$\log_b a = \log_2 4 = \log_2 2^2 = \log_2 2^2 = 2$

$\therefore \log_b a = k$

$p > -1$ so,

$= \Theta(n^k \log_n^{p+1})$

$= \Theta(n^2 \log n^1)$

$= \Theta(n^2 \log n) = T(n)$