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Divisbvility by p of $N_X(p)$

For any scheme X over $\mathbf{Z}$ and any prime p we consider $N_X(p)$ the number of $\mathbf{F}_p$-points of the scheme $X/\mathbf{F}_p$. Given a in $\mathbf{Z}$, we study the set $\{p : p \nmid N_X(p) - a\}$. In case $\dim X$ is small (lower than 3), we give a simple criterion for this set to be infinite and in this case we prove it has positive lower density.