1 Change of Variables

THM : `17.2 mnk`
LET : $G : \mathrm{U} \to \mathrm{V}$ is a *diffeomorphism* of open sets U, $\mathrm{V} \subset \mathbb{R}^n$,
IF $f : \mathrm{V} \to \mathbb{R}$ is a continuous
THEN : f is *integrable* over V and defined as:
$\int_{\mathrm{V}} := \int_{\mathrm{U}} (f \circ G)|\det DG|$, provided RHS exists

Approach i) localize the result of the theorem for each p in U to some
ii) the collection of local spaces TODO
ie for each $\mathrm{p} \in \mathrm{U}$ construct an open neibourhood $\mathrm{U_p}$ around p

THM : `svk 3-12`
IDEA : Two different partitions of unity subordinate to the same cover have the same integral

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