# On Morita Equivalence of Categories

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We introduce the notion of *bridge* between categories, and show how *profunctors* and, in particular, *adjoint* pairs of functors can be interpreted as special bridges. Using this technique of profunctors and bridges we prove that two categories are *equivalent* [resp. *Morita equivalent*] if and only if there exist a certain kind of bridge between them.
The case of Morita equivalence also gives an elegant proof of the classical result:
Let $\mathcal{A}$ and $\mathcal{B}$ be categories. We show that statements *a)* and *c)* below are both equivalent to *b)*.

*a)* There is an invertible profunctor between $\mathcal{A}$ and $\mathcal{B}$.
*b)* There is a so called Morita-bridge between $\mathcal{A}$ and $\mathcal{B}$.
*c)* The idempotent (or Cauchy) completions of $\mathcal{A}$ and $\mathcal{B}$ are equivalent.

## References

[1] Bertalan Pécsi, *On Morita Equivalence of Rings and Categories*, preprint www.renyi.hu/~aladar (2007) 1-8.