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## One-sided clean and weakly exchange rings

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In 1977, Nicholson defined *clean* rings requiring every element to be a sum of a unit and an idempotent, and proved that these are *exchange* rings, a class of rings which are (also) characterized by the lifting property of idempotents modulo every left (respectively right) ideal.

A ring will be called *one-sided clean* if in the previous definition we replace "unit" by a "one-sided unit". Since such rings are not generally exchange, a suitable notion (called *weakly exchange*) is defined in order to generalize mostly all the known results.