well_fnd_intro[12,41]

Defines predicate saying that a binary relation over some type
is well-founded.
Well-foundedness is phrased in terms of a 'course of values'
induction principle, since this is more useful constructively
than alternative formulations (e.g. saying that there are
no infinite descending chains, or saying that every non-empty
subset has a minimal element). NB: constructively, these
alternative formulations are not equivalent.

Lemmas and tactics are introduced for induction on the rank of
an expression ('inverse image induction'). One deficiency of Nuprl's
type theory is that in some situations (notably when proving well-formedness
goals) lemmas are unusable, and instead one must resort to using
tactics that reproduce equivalent sequences of primitive rules.
The theorem 'inv_image_ind_tp' provides a template for such a tactic
that mirrors the 'inv_image_ind_a' lemma.