

**Remark 23.18.** [240] *The envelope curve has an important property in the field of differential equations. Suppose  $y = f_a(x)$  are solutions of the differential equation  $\Phi(y', y, x) = 0$ : then also  $g$  is solution (immediate verification).<sup>a</sup>*

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<sup>a</sup>With equations in normal form, however, this notion is not interesting because there is local uniqueness and then there can be no special solutions; that is, if  $g = f_a$   $g' = f'_a$  at a point  $x$  then they coincide in a neighborhood.