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## homotopy extension property

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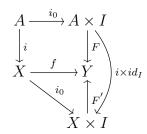
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Let X be a topological space and A a subspace of X. Suppose there is a continuous map  $f: X \to Y$  and a homotopy of maps  $F: A \times I \to Y$ . The inclusion map  $i: A \to X$  is said to have the homotopy extension property if there exists a continuous map F' such that the following diagram commutes:



Here,  $i_0 = (x, 0)$  for all  $x \in X$ .