



## 1 Why

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## 2 Result

**Proposition 1.** *Suppose  $X$  is a complete inner product space,  $A \subset X$  closed and convex, and  $x \in X$ . There exists a unique  $z \in A$  satisfying*

$$d(z, x) = \inf_{y \in A} d(y, x).$$

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<sup>1</sup>Future editions will include.



