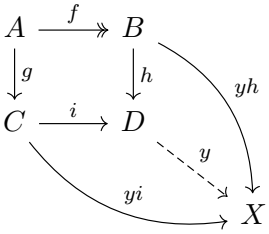

$h \circ f = i \circ g$
$\forall X \in Ob(C),\ \forall \langle p, q \rangle \in B \to X \times C \to X$
$\quad \exists! r \mid r \circ h = p \wedge r \circ i = q$
$\forall X \in Ob(C),\ \forall \langle p, q \rangle \in B \to X \times C \to X$
$\quad pf_X!(p, q) \coloneqq \text{ unique } r \mid r \circ h = p \wedge r \circ i = q$
$\forall X \in Ob(C)\ \forall \{p, q\} \subseteq B \to X$
$\quad p \circ f = q \circ f \implies p = q$

$x \in D \to X \mid x \circ i = y \circ i \wedge h \circ f = i \circ g \implies$
$(x \circ h) \circ f$
$\quad = x \circ (h \circ f)$
$\quad = x \circ (i \circ g)$
$\quad = (x \circ i) \circ g$
$\quad = (y \circ i) \circ g$
$\quad = y \circ (i \circ g)$
$\quad = y \circ (h \circ f)$
$\quad = (y \circ h) \circ f \implies$
$x \circ h = y \circ h$
$x = pf_X!(x \circ h, x \circ i) = pf_X!(y \circ h, y \circ i) = y \implies$
i is epic

---

pushout of epic is epic ■