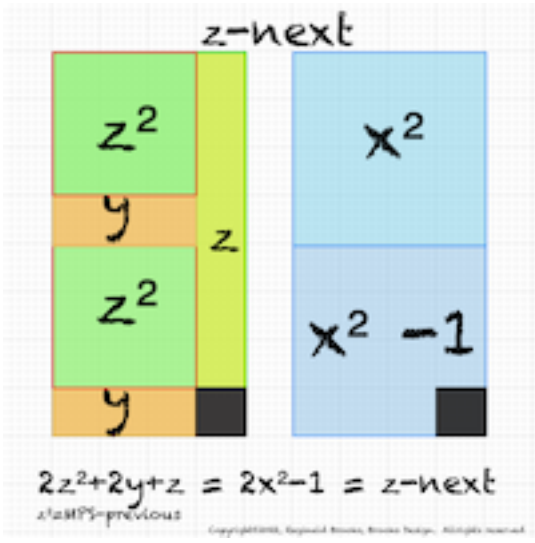
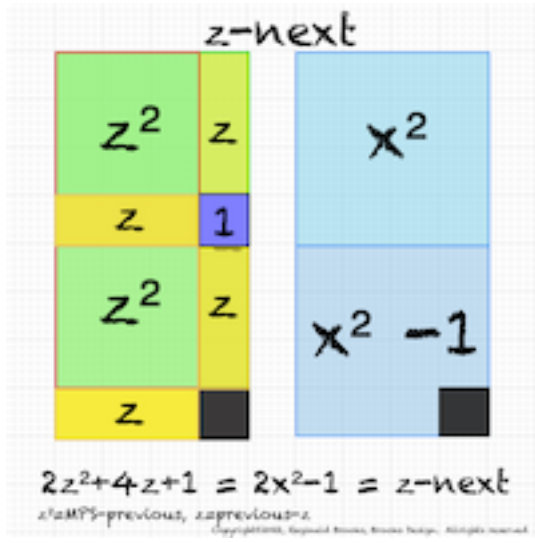
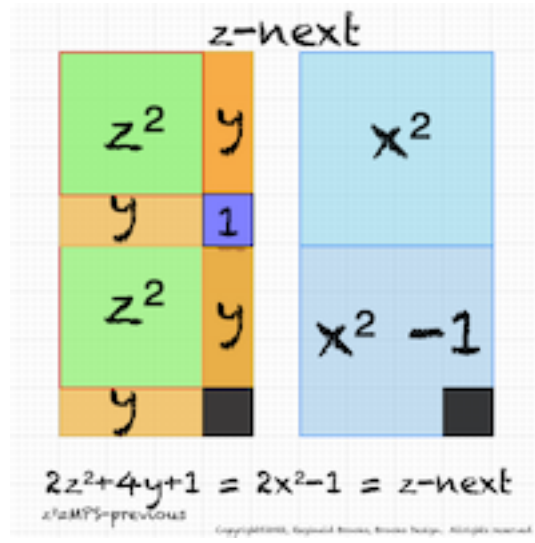
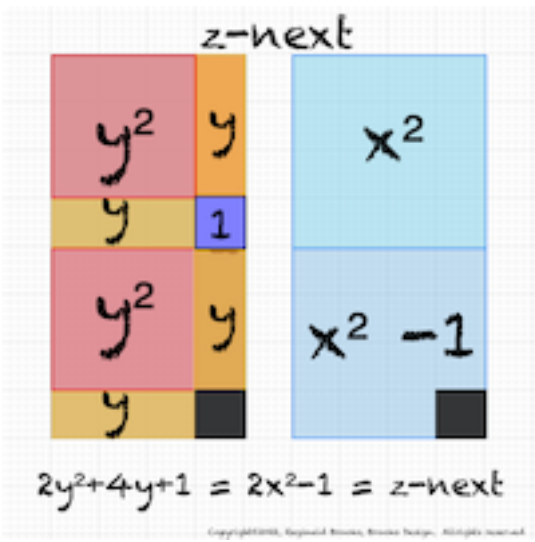
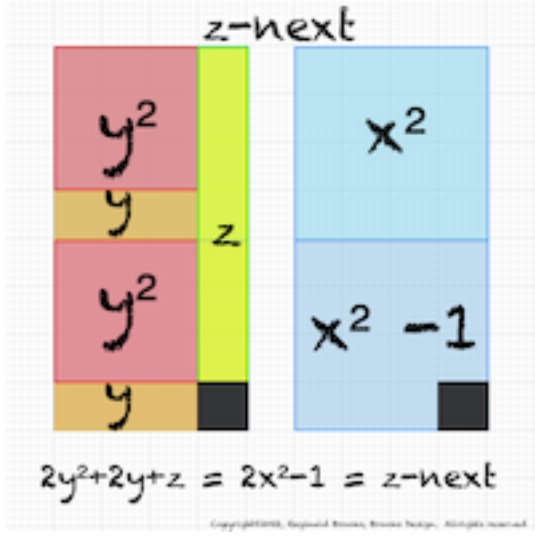
# The Simple Geometry of forming the "next" z

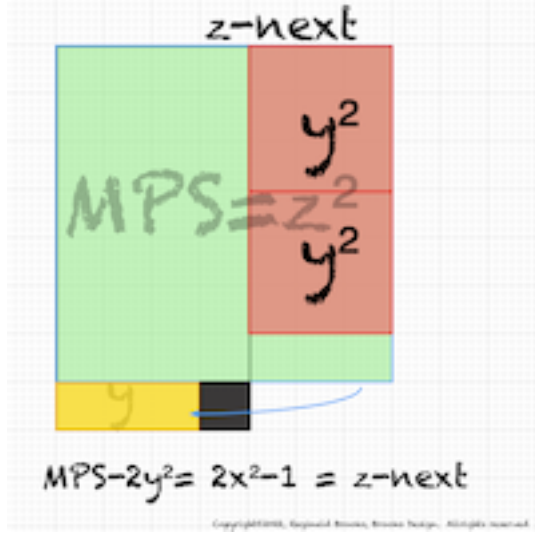


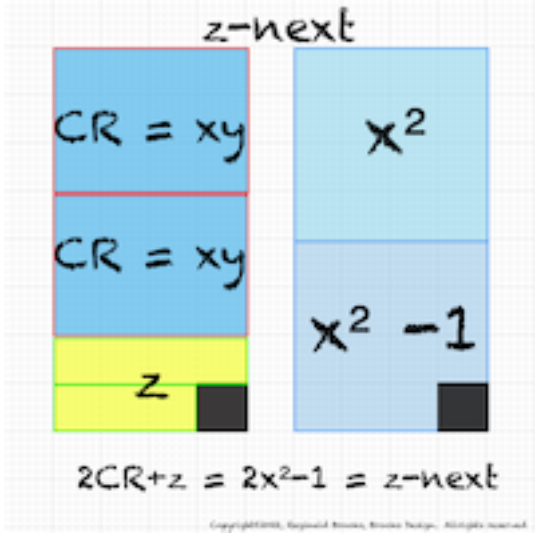



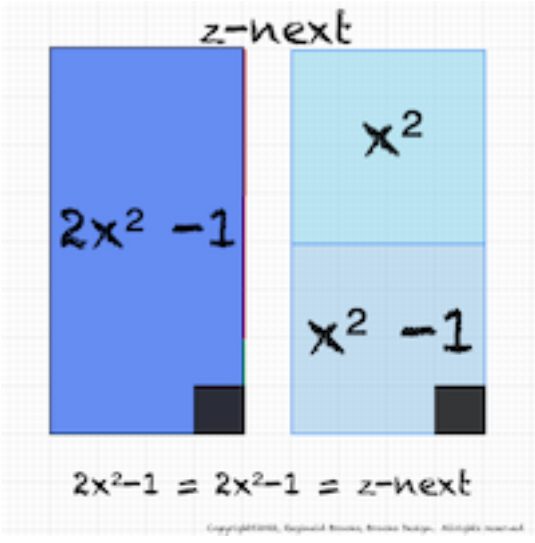



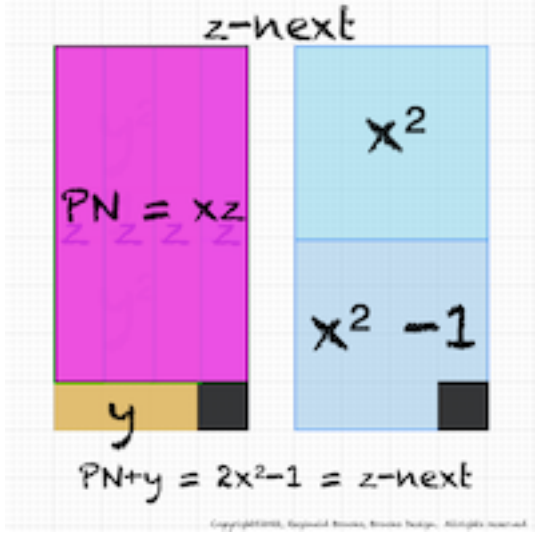



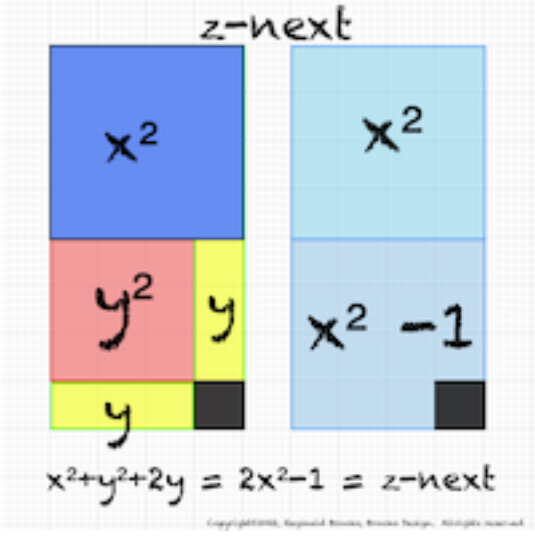



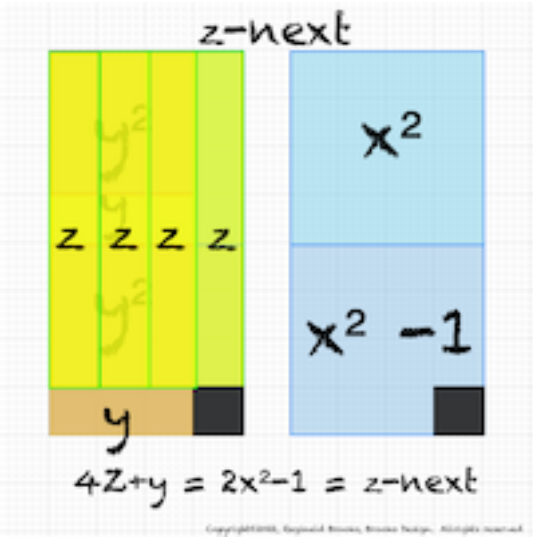



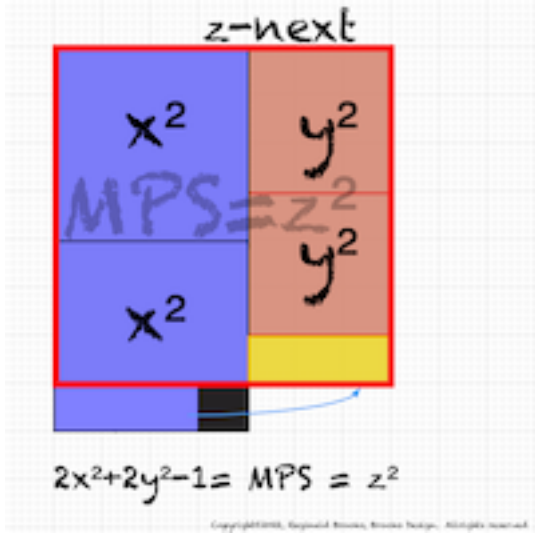




PN = Perfect Number = xz  Mp = Mersenne Prime = $z = 2^p - 1 = x + y$  $Mp^2$ = Mersenne Prime Square = MPS = $z^2$

$x = 2^{p-1}$ = short side of PN rectangle  y = x-1 = short side of OC rectangle  OC = ODD Complement rectangle to PN = yz

$Mp^2 = PN + OC = xz + yz = z^2$  CR = Complement Rectangle = xy  $x^2$ = Perfect Number Square

$2^n$ = exponential power of 2, where n = 1,2,3,…, e.i. $2^n$ = 1–2–4–8–16…  $\sum$ of $2^n$ = 1–3–7–15–31–…, the difference ($\Delta$) = 2–4–8–16–..