

Decimal To Posit

Input:
integ = Floating
Point Integer in
Decimal Format

Input: es
(exponent size)

useed = $2^{(2^{es})}$
reg = sign = 0
expVal = frac = 0

sign = 1 (FALSE) Positive sign = 0 (TRUE)

temp = 1

Decision: $\text{integ} / (\text{temp} * \text{useed}) < 1$
TRUE: temp *= useed, reg += 1
FALSE: Proceed to next decision

// Keep multiplying by useed for closest
useed power without surpassing

Decision: $\text{integ} / (\text{temp} * 2) < 1$
TRUE: temp *= 2, expVal += 1
FALSE: Proceed to final calculation

// Keep multiplying closest used
power by 2 for closest two power
without surpassing

frac = integ / temp