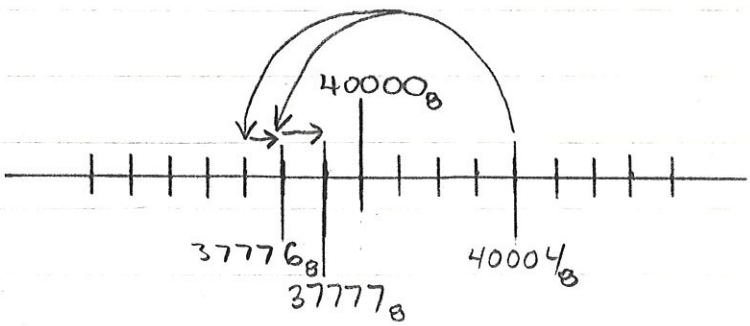
ME Module Exponent Handling For Reciprocal Square Root Approximation

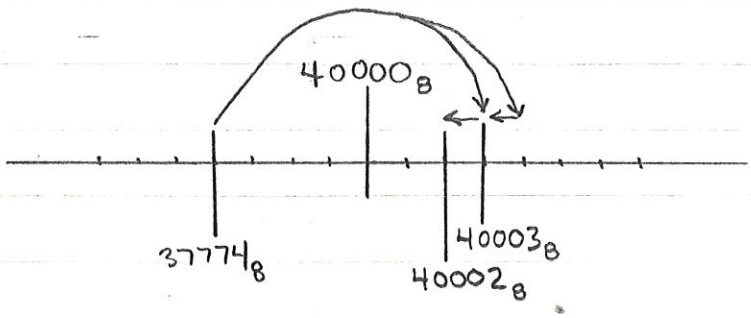
Steps on the ME module:

1. k operand exponent from the VRs (no j operand, bit Ø via RA)
2. Remove bias (toggle bit 2^{14} of exponent)
3. Compliment k exponent ($2^x = 1/2^{-x}$)
4. Force j exponent to +3 (no bias)
5. Add exponents (k+3)
6. Divide exponent by 2 (right shift one place, preserve upper bit)
7. -1 if normalization path is taken (may or may not need it)
8. Restore bias (toggle bit 2^{14} of exponent)

Examples:



k exponent	$= 40004_8$	
remove bias	$= 00004_8$	
compliment k	$= 77773_8$	
k + 3	$= 77776_8$	
divide by 2	$= 77777_8$	
no -1	$= 77777_8$	yes -1 $= 77776_8$
restore bias	$= 37777_8$	restore bias $= 37776_8$



k exponent	$= 37774_8$	
remove bias	$= 77774_8$	
compliment k	$= 00003_8$	
k + 3	$= 00006_8$	
divide by 2	$= 00003_8$	
no -1	$= 00003_8$	yes -1 $= 00002_8$
restore bias	$= 40003_8$	restore bias $= 40002_8$