Base	10	2	4	8	16
	0	0	0	0	0
	1	1	1	1	1
	2	10	2	2	2
	3	11	3	3	3
	4	100	10	4	4
	5	101	11	5	5
	6	110	12	6	6
	7	111	13	7	7
	8		20	10	8
	9		21	11	9
	10		22	12	A
	11		23	13	B
	12		30	14	C
	13		31	15	D
	14		32	16	E
	15		33	17	F
	16			20	10

$$0 \leq b_i \leq (R-1)$$

$$R_{10} = 10_R$$

Division method for converting an integer

$(356.1)_8 = (3 \times 10^2 + 5 \times 10^1 + 6 \times 10^0 + 1 \times 10^{-1})_8$

$(3 \times 8^2 + 5 \times 8^1 + 6 \times 8^0 + 1 \times 8^{-1})_{10} = (238.125)_{10}$

Integer $(356)_8 <= (3 \times 8^2 + 5 \times 8^1 + 6 \times 8^0)_{10} <= (238)_{10}$

Reverse the multiplications

Divide $(3 \times 8^2 + 5 \times 8^1 + 6 \times 8^0)_{10}$ by 8 — 29.75
Quotient $3 \times 8^1 + 5 \times 8^0$ Remainder 6

Divide $(3 \times 8^1 + 5 \times 8^0)_{10}$ by 8 — 3.625
Quotient 3×8^0 Remainder 5

Divide $(3 \times 8^0)_{10}$ by 8 — 0.375
Quotient 0 Remainder 3

First remainder from division (LSD)

Multiplication method for converting a fraction

$$(356.16)_8 = (3 \times 10^2 + 5 \times 10^1 + 6 \times 10^0 + 1 \times 10^{-1} + 6 \times 10^{-2})_8$$

$$(3 \times 8^2 + 5 \times 8^1 + 6 \times 8^0 + 1 \times 8^{-1} + 6 \times 8^{-2})_{10} = (238.21875)_{10}$$

Fraction $(0.16)_8$ <= $(1 \times 8^{-1} + 6 \times 8^{-2})_{10}$ <= $(0.21875)_{10}$

Reverse the division

Multiply $(1 \times 8^{-1} + 6 \times 8^{-2})_{10}$ by 8 1.75

Integer 1 Fraction 6×8^{-1}

Multiply $(6 \times 8^{-1})_{10}$ by 8 6.0

Integer 6 Fraction 0

First integer from multiplication (MSD)