

k) $E49F_{16}$ to decimal

1 to binary

E 4 9 F

1110 0100 1001 1111

2 to decimal

$$\begin{aligned} 1110010010011111 &= 1 \times 2^0 + 1 \times 2^1 + 1 \times 2^2 + 1 \times 2^3 \\ &+ 1 \times 2^4 + 0 \times 2^5 + 0 \times 2^6 + 1 \times 2^7 + 0 \times 2^8 + 0 \times 2^9 \\ &+ 1 \times 2^{10} + 0 \times 2^{11} + 0 \times 2^{12} + 1 \times 2^{13} + 1 \times 2^{14} + 1 \times 2^{15} \\ &= 1 + 2 + 4 + 8 + 16 + 128 + 1024 + 8192 + 16384 + \\ &+ 32768 = 58527_{10} \end{aligned}$$

$$E49F_{16} = 58527_{10}$$

l) $3G2_{14}$ to 13-base notation

1 to decimal

$$\begin{aligned} 3G2 &= 2 \times 17^0 + \overset{(16)}{G} \times 17^1 + 3 \times 17^2 = 2 + 272 + 867 \\ &= 1141_{10} \end{aligned}$$

2 to 13-base notation

$$\begin{array}{r} 1141 \overline{)13} \\ 87 \overline{)13} \\ 6 \end{array} \left. \vphantom{\begin{array}{r} 1141 \overline{)13} \\ 87 \overline{)13} \\ 6 \end{array}} \right\} 69A_{13}$$

10
↖ 9

