

7.1.

a) $1101_{(2)} = ?_{(10)}$

$$1101_{(2)} = 2^0 + 2^1 + 2^3 = 1 + 2 + 8 = 11_{(10)}$$

b) $110_{(16)} = ?_{(10)}$

$$110_{(16)} = 11 \cdot 16^0 + 1 \cdot 16 = 11 + 16 = 27_{(10)}$$

c) $321_{(5)} = ?_{(10)}$

$$321_{(5)} = 1 \cdot 5^0 + 2 \cdot 5^1 + 3 \cdot 5^2 = 1 + 10 + 75 = 86_{(10)}$$

$86_{(10)} = ?_{(5)}$

$86 : 5 = 21 \text{ rest } 1$

$\frac{86}{5} = 21$

$5 : 5 = 1 \text{ rest } 0$

$1 : 5 = 0 \text{ rest } 1$

$86_{(10)} = 1112_{(5)}$

d) $33-16$ in base 9

$$\begin{array}{r} 33_{(9)} - 16_{(9)} \\ \hline 15_{(9)} \end{array}$$

$33-16_{(9)} = 15_{(9)}$