

## Modelo de exame

1A.

a)  $(134)_{10} \rightarrow ( )_2$

$$134 = 2 \times 67 + 0 \text{ LSB}$$

$$67 = 2 \times 33 + 1$$

$$33 = 2 \times 16 + 1$$

$$16 = 2 \times 8 + 0$$

$$8 = 2 \times 4 + 0$$

$$4 = 2 \times 2 + 0$$

$$2 = 2 \times 1 + 0$$

$$1 = 2 \times 0 + 1 \text{ MSB}$$

$$(134)_{10} = (10000110)_2$$

b) Complemento de dois de 11010110 :

$$\begin{array}{ccccccc} 1 & 1 & 0 & 1 & 0 & 1 & 1 & 0 & & 0 & 0 & 1 & 0 & 1 & 0 & 0 & 1 & & 0 & 0 & 1 & 0 & 1 & 0 & 1 & 0 \\ & & & & & & & & \nearrow & & & & & & & & \nearrow & & & & & & & & & & \\ & & & & & & & & \text{compl. de um} & & & & & & & & +1 & & & & & & & & & \end{array}$$

$$C_2(11010110) = 00101010$$

c)  $(147)_{10} \rightarrow ( )_{BCD}$

$$(1)_{10} = (0001)_{BCD}$$

$$(4)_{10} = (0100)_{BCD}$$

$$(7)_{10} = (0111)_{BCD}$$

$$(147)_{10} = (0001\ 0100\ 0111)_{BCD}$$

1B.

a)  $(247.351)_{10} \rightarrow ( )_2$