

a)  $1001, 1001_2 = 9, 89$

$$2^3 + 2^0, 2^{-1} + 2^{-4} = 9 \quad \frac{1}{2} + \frac{1}{16} = \frac{8}{16} + \frac{1}{16} = \frac{9}{16}$$

b)  $101101, 1011_2 = 45, 6875$

$$2^0 + 2^2 + 2^3 + 2^5$$

$$2^{-1} + 2^{-3} + 2^{-4} = \frac{1}{2} + \frac{1}{8} + \frac{1}{16} = \frac{11}{16}$$

c)  $1010101, 1101_2 = 85, 6875$

$$2^0 + 2^2 + 2^4 + 2^6$$

d)  $11100111, 0011_2 = 231, 1875$

$$2^0 + 2^1 + 2^2 + 2^5 + 2^6 + 2^7$$

$$2^{-3} + 2^{-4} = \frac{1}{8} + \frac{1}{16} = \frac{24}{128} = \frac{12}{64} = \frac{6}{32} = \frac{3}{16}$$

e)  $1011101, 0001_2 = 93, 0625$

$$2^0 + 2^2 + 2^3 + 2^4 + 2^6$$

$$1 + 4 + 8 + 16 + 64 = 93 \quad 2^{-4} = \frac{1}{16}$$

f)  $42, 3125_{10} = 101010, 011$

$$2^5 + 2^2 + 2^1$$

$$0,3125 \times 2 = 0,625$$

$$0,625 \times 2 = 1,25$$

$$0,25 \times 2 = 1$$

g)  $71,625_{10} = 100111, 11$

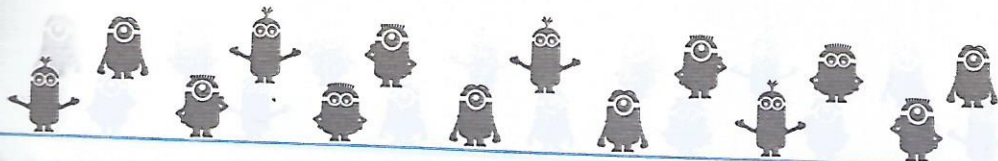
$$64 + 4 + 2 + 1$$

$$2^5 + 2^2 + 2^1 + 2^0$$

h)  $104,8125_{10} = 1101000, 111$

$$64 + 32 + 8$$

$$0,8125 \times 2 = 1,625$$



$$i) 125,5625_{10} = 111101,1001$$

$$64+32+16+8+4+1$$

$$0,5625 \times 2 = 1,1250$$

$$0,1250 \times 2 = 0,2500$$

$$0,25 \times 2 = 0,5$$

$$0,5 \times 2 = 1,1$$

$$j) 162,6875 = 10100010,1011$$

$$128 \quad 32 \quad 2$$

$$0,6875 \times 2 = 1,3750$$

$$0,3750 \times 2 = 0,750$$

$$0,750 \times 2 = 1,5$$

$$1,5 \times 2 = 1$$