BASE 10 (Decimal) to/from BASE 16 (Hexadecimal) CONVERSION

(A=10, B=11, C=12, D=13, E=14, F=15)

Example 1

Convert $(2E4)_{16}$ to base 10

$4 \times 16^0 = 4$
$14 \times 16^1 = + 224$
$2 \times 16^2 = + 512$

740

$(2E4)_{16} = (740)_{10}$

Example 2

Convert $(A3C1)_{16}$ to base 10

$1 \times 16^0 = 1$
$12 \times 16^1 = + 192$
$3 \times 16^2 = + 768$
$10 \times 16^3 = + 40960$

41921

$(A3C1)_{16} = (41921)_{10}$

Example 3

Convert $(729)_{10}$ to base 16 → $(2DB)_{16}$

2 / 16 = 0 remainder 2 (2)
45 / 16 = 2 remainder 13 (D)
729 / 16 = 45 remainder 11 (B)

$(729)_{10} = (2DB)_{16}$

Note: 729 / 16 = 45.5625
to get remainder multiply the decimal portion by 16 (the base)
0.5625 x 16 = 11 → remainder is 11.