1) 0.25_{10}

- $0.25 * 2 = 0.5$
  $0.5 * 2 = 1.0$

$\Rightarrow 0.25_{10}$ is 0.1_2

- $0.25 * 8 = 2.0$

$\Rightarrow 0.25_{10}$ is 0.2_8

- $0.25 * 16 = 4.0$

$\Rightarrow 0.25_{10}$ is 0.4_{16}

2) 0.25_8

$= 2 \times 8^{-1} + 5 \times 8^{-2}$

$= 0.328125_{10}$

- $0.328125 \times 2 = 0.65625$
  $0.65625 \times 2 = 1.3125$
  $0.3125 \times 2 = 0.625$
  $0.625 \times 2 = 1.25$
  $0.25 \times 2 = 0.5$
  $0.5 \times 2 = 1.0$

$\Rightarrow 0.25_8$ is 0.101010_2

- $0.328125 \times 16 = 5.25$
  $0.25 \times 16 = 4.0$

$\Rightarrow 0.25_8$ is 0.45_{16}

3) 0.25_{16}

$= 2 \times 16^{-1} + 5 \times 16^{-2}$

$= 0.14453125$

0.25_{16} is 0.14453125_{10}

- $0.14453125 \times 2 = 0.2890625$
  $0.2890625 \times 2 = 0.578125$
  $0.578125 \times 2 = 1.15625$
  $0.15625 \times 2 = 0.3125$
  $0.3125 \times 2 = 0.625$
  $0.625 \times 2 = 1.25$
  $0.25 \times 2 = 0.5$
  $0.5 \times 2 = 1.0$

0.25_{16} is 0.101001_2

- $0.14453125 \times 8 = 1.15625$
  $0.15625 \times 8 = 1.25$
  $0.25 \times 8 = 2.0$

0.25_{16} is 0.211_8

4) 0.1101_2

$= 1 \times 2^{-1} + 1 \times 2^{-2} + 0 \times 2^{-3} + 1 \times 2^{-4}$

$= 0.8125$

0.1101_2 is 0.8125_{10}

- $0.8125 \times 8 = 6.5$

  $0.5 \times 8 = 4.0$

  0.1101_2 is 0.46_8

- $0.8125 \times 16 = 13.0$

  0.1101_2 is $0.D_{16}$