

$$1) \underline{37.25}$$

$$37/2 = 18 \text{ R } 1$$

$$18/2 = 9 \text{ R } 0$$

$$9/2 = 4 \text{ R } 1$$

$$4/2 = 2 \text{ R } 0$$

$$2/2 = 1 \text{ R } 0$$

$$1/2 = 0 \text{ R } 1$$

$$.25 \times 2 = 0.5$$

$$.5 \times 2 = 1.0$$

$$37.25_{10} = 100101.01_2$$

$$= 0.10010101 \times 2^6$$

~~$$10010101000001101$$~~

$$010010101000000000000000000000110$$

$$\bullet \underline{0.2}$$

$$0.2 \times 2 = 0.4$$

$$0.4 \times 2 = 0.8$$

$$0.8 \times 2 = 1.6$$

$$0.6 \times 2 = 1.2$$

$$0.2 \times 2 = 0.4$$

$$0.4 \times 2 = 0.8$$

$$00011001100110011001100100000000$$

...

...

$$0.2_{10} = 0.\underline{0011}_2 \rightarrow 0.0011 \times 2^0$$