Q,2

① $1.000 \quad * 2^{0}$

     Exponent: 0+127 = 127

     Mantissa: 0000 0000 0000 0000 0000 0000 000

∴ Number Representation:

     0   0111 1111   0000 0000 0000 0000 0000 000

②   12-375

     $12.375 = \quad 1100.011 \ 00 \cdots \quad = 1.100011 * 2^{+3}$

     $0.375 \times 2 = 0.75$

       $0.75 \times 2 = 1.5$

        $0.5 \times 2 = 1$

     Exponent: $127 + 3 = 130$

∴ Number Representation

     0   1000 0010   1000 1100 0000 0000 0000 000

③ $- 0.25$

     $0.25 \times 2 = 0.5$

     $0.5 \times 2 = 1.0$

     $0.25 = \quad 0.0100 \quad = 1.00 * 2^{-2}$

       Exponent: $-2 + 127 = 125$

∴ number Representation:

     1   0111 1101   0000 0000 0000 0000 0000 000