①

$C\emptyset B5540\cdots 0$ (hex)

$\downarrow$ to binary

$\underbrace{1100\ 0000\ 1011,}_{\substack{E=2^{10}+11\\(=1035)}}\ \underbrace{0101\ 0101\ 0100\ 0\cdots0,}_{F}$

$\swarrow$
$S=1$

$$\left[\Rightarrow \text{ true exponent } = E - \text{bias} = (2^{10}+11)-(2^{10}-1)=12\right]$$

Let $m \,\hat{=}\, 1.F = 1.010101010101$

$$\Rightarrow m = 1 + 2^{-2} + 2^{-4} + 2^{-6} + 2^{-8} + 2^{-10}$$
$$2^{-2}m = 2^{-2} + 2^{-4} + 2^{-6} + 2^{-8} + 2^{-10} + 2^{-12}$$

$$m(1 - 2^{-2}) = 1 - 2^{-12}$$

$$\Rightarrow m = \frac{4}{3}(1 - 2^{-12})$$

So, value is:

$$-\frac{4}{3}\left(1-2^{-12}\right)2^{12} = -\frac{4}{3}\left(2^{12}-1\right)$$

$$= -\frac{4}{3}\left(4095\right)$$

$$= \boxed{-5460}$$

② $515 = 512 + 2 + 1 = 2^9 + 2 + 1$

$$= 2^9 (1 + \underbrace{2^{-8} + 2^{-9}}_{F})$$

$\Rightarrow E = 9 + 127 = 136 = 128 + 8$

$$= 2^7 + 2^3$$

$$= \underline{10001000}, \quad \text{(binary)}$$

$F = 2^{-8} + 2^{-9}$

$$= 0.\underline{000000011}, \quad \text{(binary)}$$

$S = \underline{0},$

So, IEEE format is:

$\underline{0}\ \underline{10001000}\ \underline{00000000}\underline{1100}\cdots$

$\downarrow$ hex

$$\boxed{4400C000}$$