

$$10.11) 2^3 \times \frac{13}{16} = 2^3 \times (0.8125) = 2^{010} \times 1.101000$$

$$2^4 \times (-\frac{9}{16}) = 2^4 \times (-0.5625) = 2^{011} \times (-1.001000)$$

$$(X \times Y)_{\text{浮}} = (1.101 \times 2^{010}) \times (-1.001 \times 2^{011})$$

将 x 和 y 的指数部分相加 $e^x + e^y = 010 + 011 = 101 = 5$

用移码表示, 则为 $E_x + E_y = 5 + 127 = 132$

尾数相乘如下:

$$\begin{array}{r} 1.101 \\ \times 1.001 \\ \hline 1101 \\ 0000 \\ 0000 \\ 0000 \\ \hline 1110101 \end{array}$$

得到的乘积为 1.110101×2^5 , 又因为符号位不相同
故结果为 $-2^{101} \times 1.110101$

$$(12) 2^{-2} \times \frac{13}{32} = 2^{-010} \times 0.40625 = 2^{-010} \times 0.01101 = 2^{-100} \times 1.101$$

$$2^3 \times \frac{15}{16} = 2^{011} \times 0.9375 = 2^{011} \times 0.1111 = 2^{010} \times 1.111$$

将 x 和 y 的指数部分相减 $-010 - 010 = -110$

尾数相除得

$$\begin{array}{r} 0.110011 \\ 0.1111 \overline{) 1.1010} \\ \underline{-0.1111} \\ 0.10010 \\ \underline{-0.0111} \\ 0.00011 \\ 0.001111 \\ \underline{-0.0001100} \\ 0.0001111 \\ \underline{-0.00011000} \\ 0.00000111 \\ \underline{-0.00000111} \\ 0.00000000 \end{array}$$

故结果为商为

$$2^{-110} \times 0.110011$$

余数为 0.000001