

作业(1) 杨舒 2021016471

8.  $(216.75)_{10} = (11011000.11)_2$

$216 = 1 \times 2^7 + 1 \times 2^6 + 1 \times 2^4 + 1 \times 2^3$

$0.75 = 1 \times 2^{-1} + 1 \times 2^{-2}$

$(1756342)_8 = (111101110011100010)_2$

$= (111101110011100010)_2$

$(1A4E.3B)_{16} = (0001101001001110.0011011)_2$

$= (110101001110.0011011)_2$

9.  $(10110111.10111)_2 = (367.71875)_{10}$

$= (357.36)_8$

$= (16F.88)_{16}$

$2 \rightarrow 10: 2^8 + 2^6 + 2^5 + 2^3 + 2^2 + 2^1 + 2^0 + 2^{-1} + 2^{-2} + 2^{-4} + 2^{-5}$   
 $= 256 + 64 + 32 + 8 + 4 + 2 + 1 + 0.5 + 0.25 + 0.0625 + 0.03125$

$= 367.71875$

$2 \rightarrow 8: 10110111.10111$

$557.56$

$2 \rightarrow 16: 00010110111.1011000$

$16F.88$

$(10110110.11011)_2 = (182.859375)_{10}$

$= (266.67)_8$

$= (AB.AC)_{16}$

$2 \rightarrow 10: 2^7 + 2^5 + 2^4 + 2^2 + 2^1 + 2^{-1} + 2^{-2} + 2^{-4} + 2^{-5} + 2^{-6}$

$= 128 + 32 + 16 + 4 + 2 + 0.5 + 0.25 + 0.0625 + 0.03125 + 0.015625$

$= 182.859375$

$2 \rightarrow 8: 10110110.11011$

$266.67$

$2 \rightarrow 16: 10110110.1101100$

$AB.AC$

10.  $(175.25)_{10} = (257.2)_8 = (AF.4)_{16}$

$10 \rightarrow 2: 2 \mid 175$   
 $2 \mid 87 \dots 1$   
 $2 \mid 43 \dots 1$   
 $2 \mid 21 \dots 1$   
 $2 \mid 10 \dots 1$   
 $2 \mid 5 \dots 0$   
 $2 \mid 2 \dots 1$   
 $2 \mid 1 \dots 0$   
 $1 \dots 1$

$0.25$   
 $\times 2 \quad 0$   
 $0.5$   
 $\times 2 \quad 1$   
 $0$

$(1010111.01)_2$

$2 \rightarrow 8: 01010111.010$   
 $2 \quad 5 \quad 7 \quad 2$

$(257.2)_8$

$2 \rightarrow 16: 1010111.0100$   
 $A \quad F \quad 4$

$(AF.4)_{16}$

$(357)_{10} = (545)_8 = (165)_{16}$

$10 \rightarrow 2: 2 \mid 357$   
 $2 \mid 178 \dots 1$   
 $2 \mid 89 \dots 0$   
 $2 \mid 44 \dots 1$   
 $2 \mid 22 \dots 0$   
 $2 \mid 11 \dots 0$   
 $2 \mid 5 \dots 1$   
 $2 \mid 2 \dots 1$   
 $2 \mid 1 \dots 0$   
 $0 \dots 1$

$(101100101)_2$

$2 \rightarrow 8: 101100101$   
 $5 \quad 4 \quad 5$

$(545)_8$

$2 \rightarrow 16: 00010110101$   
 $1 \quad 6 \quad 5$

$(165)_{16}$