1

$16 \cdot 11 = 176$

$A = B9_{16} = 11 \cdot 16^1 + 9 \cdot 16^0 = 176 + 9 = 185$

$B = 326_{10}$

$A + B = 326 + 185 = 511 = maxint$

$maxint = 2^{n-1} - 1 = 511 \Rightarrow 2^{n-1} = 512 \Rightarrow n-1 = 9$

$\Rightarrow \underline{n = 10}$

$C \sim 3DB_{16} = \sout{3 \cdot 16^2 + 13 \cdot 16^1 + 11 \cdot 16^0}$

$= 0011\ 1101\ 1011,$

$= -(0000100101)$

$= -37_{10}$

$minint = -2^{n-1} = -2^9 = -512$

$C - D = -512 \Rightarrow$

$\Rightarrow D = C + 512$

$\Rightarrow D = -37 + 512$

$\boxed{D = 475}$

$733_8 = 7 \cdot 8^2 + 3 \cdot 8 + 3 = 475$

2

$minint \sim 100000000 \Rightarrow$

$\Rightarrow minint = -(100000000)$

$= -2^8 \Rightarrow n - 1 = 8 \Rightarrow n = 9$

$minint = -2^8 = -256$

$maxint = 2^8 - 1 = 255$

$A = B2_{16} = 11 \cdot 16 + 2 = 178_{10}$

$B = 101_{10}$

$C = 27_8 = 2 \cdot 8 + 7 = 23_{10}$

$\boxed{A + B = 178 + 101 = 279 = -(512 - 279) = -233}$

$\boxed{minint - (A + B) = -256 - (-233) = -23}$

$\boxed{D = -23 + C = -23 + 23 = 0}$

3

$\overline{(a+\bar{b}) \cdot (b+c)} + a\bar{c}b \cdot \overline{\bar{b}\,(\bar{b}+\bar{d})} =$

$= \overline{(a+\bar{b})} + \overline{(b+c)} + a\bar{c}b \cdot \left(\bar{\bar{b}} + \overline{(\bar{b}+\bar{d})}\right)$

$= (\bar{a} \cdot \bar{\bar{b}}) + (\bar{b} \cdot \bar{c}) + a\bar{c}b \cdot (b + \bar{\bar{b}} \cdot \bar{\bar{d}})$

$= a \cdot b + \bar{b} \cdot \bar{c} + a\bar{c}b \cdot b + a\bar{c}b \cdot (b \cdot d)$

$= a \cdot b + \bar{b} \cdot \bar{c} + a\bar{c}b + a\bar{c}bd$

$= a \cdot b + \bar{b} \cdot \bar{c} + a\bar{c}b\,(\underbrace{1+d}_{1})$

$= a \cdot b + \bar{b}\bar{c} + a\bar{c}b$

$= ab\,(\underbrace{1+\bar{c}}_{1}) + \bar{b}\bar{c}$

$= ab + \bar{b}\bar{c}$

4

2-адресна	0-адресна
MOV F, A	~~LOAD A~~ PUSH A
MUL F, C	~~MUL C~~
ADD F, D	PUSH C
MUL F, B	MUL
	PUSH D
	ADD
	PUSH B
	MUL
	STORE F

1	0124	I
2	2 4 3 4 4 8	Y
3	4	E
4	0 10 16 31 6 100	S
5	4	Q
6	101 102 103 104 101 102 104 103 104	adr
7	100101	M
	ISPIS: 28 11	
100		N
101	10	
102	6	
103	7	
104	5	