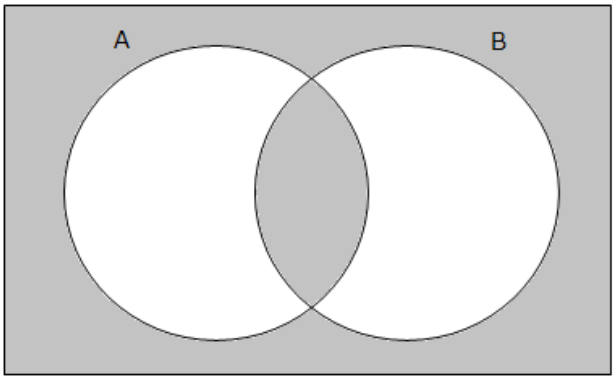
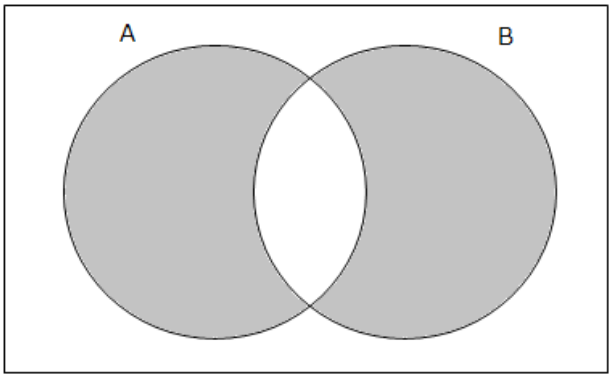
1. f＝A・B ∨ ～A・～B　の真理値表と集合を斜線で示せ.

A	B	f
0	0	1
0	1	0
1	0	0
1	1	1



2. g＝(A ∨ B) ・ (～A ∨ ～B)　の真理値表と集合を斜線で示せ.

A	B	g
0	0	0
0	1	1
1	0	1
1	1	0



3. 以下の 2 つの論理式の真理値表を示せ.

①A→(B→C)

A→B = ~A∨Bを用いると,

A→(B→C) = A→(~B∨C)
= ~A∨~B∨C

f = A→(B→C) とすると,
if A = 0 then f = 1
else if B = 0 then f = 1
else if C = 1 then f = 1
else f = 0

A	B	C	A→(B→C)
0	0	0	1
0	0	1	1
0	1	0	1
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1

②(A→B)→C

A→B = ~A∨Bを用いると,

(A→B)→C = (~A∨B)→C
= ~(~A∨B)∨C
= (A∧~B)∨C

f = (A→B)→C とすると,
if A = 1 and B = 0 then f = 1
else if C = 1 then f = 1
else f = 0

A	B	C	(A→B)→C
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	1
1	0	0	1
1	0	1	1
1	1	0	0
1	1	1	1