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Diberikan himpunan tak hampa dari D_{32}. Tentukan :
Supremum dan Infinum dari himpunan tersebut

Jawab :

$D_{32} = \{1, 2, 4, 8, 16, 32\}$ Diagram Pohon

32
|
16
|
8
|
4
|
2
|
1

Bukti =

$(1,2) \rightarrow 1 \vee 2 = Sup(1,2) = KPK(1,2) = 2$

$\qquad 1 \wedge 2 = Inf(1,2) = FPB(1,2) = 1$

$(2,4) \rightarrow 2 \vee 4 = Sup(2,4) = KPK(2,4) = 4$

$\qquad 2 \wedge 4 = Inf(2,4) = FPB(2,4) = 2$

$(4,8) \rightarrow 4 \vee 8 = Sup(4,8) = KPK(4,8) = 8$

$\qquad 4 \wedge 8 = Inf(4,8 = FPB(4,8) = 4$

$(8,16) \rightarrow 8 \vee 16 = Sup(8,16) = \text{~~~~~~~~}~ KPK(8,16) = 16$

$\qquad 8 \wedge 16 = Inf(8,16) = FPB(8,16) = 8$

$(16,32) \rightarrow 16 \vee 32 = Sup(16,32) = KPK(16,32) = 32$

$\qquad 16 \wedge 32 = Inf(16,32) = FPB(16,32) = 16$

Elemen	Supremum	Infimum
(1,2)	2	1
(2,4)	4	2
(4,8)	8	4
(8,16)	16	8
(16,32)	32	16