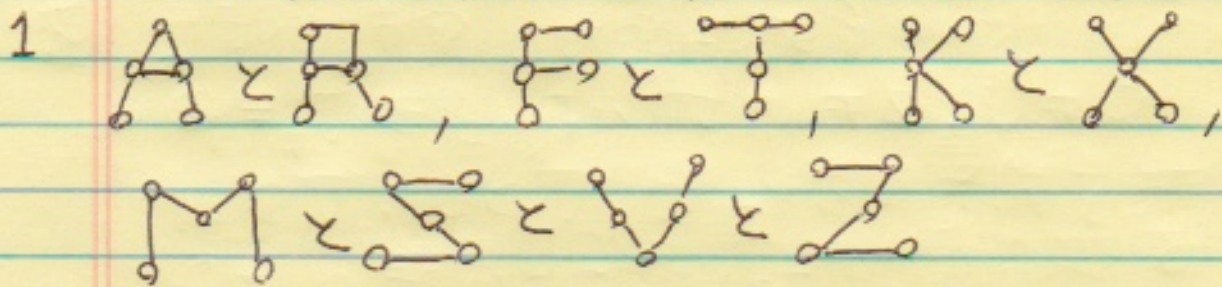


応用数学II 第5回演習・課題 解答例 1/2

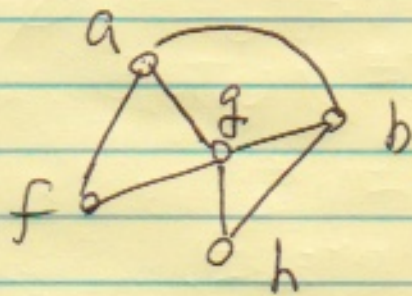


問2.1

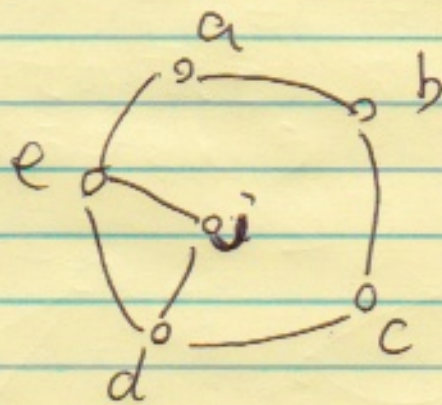
省略

問2.2

$G \setminus \{a, b, f, g, h\}$



$G - \{f, g, h, i\}$



問3.1  $(A, B, C, F), (A, B, C, E, F), (A, B, E, F), (A, B, E, C, F),$   
 $(A, D, E, F), (A, D, E, B, C, F), (A, D, E, C, F)$

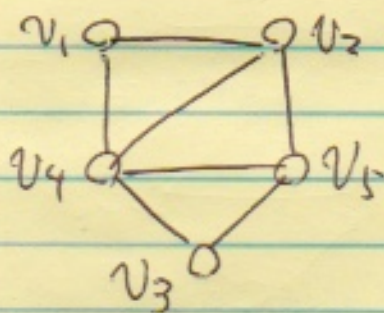
問3.2 問3.1の道  $(A, D, E, B, C, E, F), (A, D, E, C, B, E, F)$

問3.3  $d(A, F) = 3$

問3.4  $\text{diam}(G) = 3$



問4.1



問4.2

$$\begin{pmatrix} 0 & 1 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 1 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 & 0 & 0 \end{pmatrix}$$

問5

長さ2の歩道の個数 : 54

" 3 " : 178

" 4 " : 594

問6.1

$$nC_2$$

問6.2

$$\sum_{v \in V} k(v) = 2|E| \quad \left( \begin{array}{l} \text{左辺は集合 } E \text{ の} \\ \text{基数 (濃度)} \end{array} \right)$$

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