



Лабораторная работа № 13

№ 1

$$G = (V; E) = (V = \{1, 2, 3, 4, 5, 6, 7\}; E = \{(1, 2), (1, 3), (1, 4), (1, 5), (2, 4), (2, 6), (2, 7), (3, 4), (4, 5), (5, 6), (5, 7)\})$$

$$(1V2) | (1V3) | (1V4) | (1V5) | (2V4) | (2V6) | (2V7) | 1 | (3V4) | (4V5) | (5V6) | (5V7) =$$

$$= (1V23) \cdot (1V45) \cdot (2V46) \cdot (2V7) \cdot (4V35) \cdot (5V67) =$$

$$= (1V2345) \cdot (2V467) \cdot (4V35) \cdot (5V67) =$$

$$\begin{aligned}
&= (12V \ 2345V \ 1467V \ 234567) (45V \ 35V \ 467V \\
&\quad V \ 3567) = \underline{1245} \ V \ \underline{2345} \ V \ \underline{14567} \ V \ \underline{234567} \ V \\
&\quad V \ 235 \ V \ \underline{2345} \ V \ \underline{134567} \ V \ \underline{234567} \ V \\
&\quad V \ 12467V \ \underline{234567} \ V \ 1467 \ V \ \underline{234567} \ V \\
&\quad V \ 123567 \ V \ \underline{234567} \ V \ \underline{134567} \ V \ \underline{234567} \ V) = \\
&= \underline{1245} \ V \ \underline{2345} \ V \ \underline{14567} \ V \ \underline{234567} \ V \\
&\quad V \ 12467 \ V \ \underline{1467} \ V \ 123567 \ V \ 134567 = \\
&= 1245 \ V \ 1467 \ V \ 2345 \ V \ 12467 \ V \ 123567 \ V \\
&\quad \cup \ 134567
\end{aligned}$$

$$V = \{1; 2; 4; 5\} = \{3; 6; 7\}$$

$$V = \{1; 4; 6; 7\} = \{2; 3; 5\}$$

$$V = \{2; 3; 4; 5\} = \{1; 6; 7\}$$

$$V = \{1; 2; 4; 6; 7\} = \{3; 5\}$$

$$V = \{1; 2; 3; 5; 6; 7\} = \{4\}$$

$$V = \{1; 3; 4; 5; 6; 7\} = \{2\}$$

$$\{3; 6; 7\} \quad \{2; 3; 5\} \quad \{1; 6; 7\}$$

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$$\begin{aligned}
&(\underline{1V \ 2V \ 3V \ 4V \ 5}) (\underline{2V \ 1V \ 4V \ 6V \ 7}) (\underline{3V \ 1V \ 4V \ 5}) \wedge \\
&\Delta (\underline{4V \ 1V \ 2V \ 3V \ 5}) (\underline{5V \ 1V \ 3V \ 4V \ 6V \ 7}) (6V \ 2V \ 5) (7V \ 2V \ 5) = \\
&= (1V \ 3V \ 4V \ 5) (1V \ 2V \ 4V \ 6V \ 7) (2V \ 5 \ 6) (2V \ 5 \ 7) = \\
&= (1V \ 13V \ 14V \ 15 \ V \ 12V \ 23V \ 24V \ 25V \ 14V \ 34V \ 4V \ 54V \\
&\quad V \ 16V \ 36V \ 46V \ 56 \ V \ 17V \ 37V \ 47V \ 57) (2V \ 25V \ 26V \\
&\quad V \ 25V \ 5V \ 56V \ 27V \ 57V \ 67) = \\
&= (1V \ 13V \ 14V \ 15 \ V \ 12V \ 23V \ 24V \ 25V \ 34V \ 4V \ 45V \\
&\quad V \ 16V \ 36V \ 46V \ 56 \ V \ 17V \ 37V \ 47V \ 57) (2V \ 25V \\
&\quad V \ 26V \ 5V \ 56 \ V \ 27V \ 57V \ 67) =
\end{aligned}$$

$$\begin{aligned}
 &= (1 \vee 23 \vee 25 \vee 4 \vee 36 \vee 56 \vee 37 \vee 57) (2 \vee 5 \vee 67) = \\
 &= (12 \vee \underline{23} \vee \underline{25} \vee 24 \vee \underline{236} \vee \underline{286} \vee \underline{237} \vee \underline{257} \vee 15 \vee \\
 &\quad \vee \underline{253} \vee \underline{25} \vee 25 \vee \underline{356} \vee \underline{56} \vee \underline{357} \vee \underline{57} \vee \\
 &\quad \vee 167 \vee \underline{2367} \vee \underline{2567} \vee 467 \vee 367 \vee \underline{567} \vee 367 \vee \\
 &\quad \vee \underline{567}) = 12 \vee 23 \vee 24 \vee 15 \vee 25 \vee 45 \vee 56 \vee 57 \vee \\
 &\quad \vee 167 \vee 467 \vee 367 \vee 367
 \end{aligned}$$

$$\begin{aligned}
 &\{1; 2\} \quad \{2; 3\} \quad \{2; 4\} \quad \{1; 5\} \quad \{2; 5\} \quad \{4; 5\} \\
 &\{5; 6\} \quad \{5; 7\}
 \end{aligned}$$

√3

$$\begin{aligned}
 &1245 \vee 1467 \vee 2345 \vee 12467 \vee 1234567 \vee \\
 &\vee 134567
 \end{aligned}$$

$$\begin{aligned}
 T_1 &= \{1; 2\} 4; 5\} & T_2 &= \{1; 4; 6; 7\} & T_3 &= \{2; 3; 4; 5\} \\
 T_4 &= \{1; 2; 4\} 6; 7\} & T_5 &= \{1; 2; 3; 5; 6; 7\} \\
 T_6 &= \{1; 3; 4; 5; 6; 7\}
 \end{aligned}$$

$$\begin{aligned}
 S &= \{1; 3; 6; 7\} ; S_2 = \{2; 3; 5\} \quad S_3 = \{1; 6; 7\} ; \\
 S_4 &= \{3; 5\} \quad S_5 = \{4\} \quad S_6 = \{2; 3\}
 \end{aligned}$$

$$\begin{aligned}
 R &= (3) \wedge (2 \vee 6) \wedge (1 \vee 2 \vee 4) \wedge (5) \wedge (2 \vee 4) \wedge \\
 &\quad \wedge (1 \vee 3) \wedge (1 \vee 3) = 3 \wedge (2 \vee 4) \wedge (2 \vee 6) \wedge 5 = \\
 &= (23 \vee 34) \wedge (25 \vee 56) = 235 \vee 2345 \vee 2356 \vee \\
 &\quad \vee 3456 = 235 \vee 3456
 \end{aligned}$$

$$\{2; 3; 5\}$$

$$\chi(6) = 1$$