

V = {1,3,4,2}  
R = {1,3,5,6}  
A = {1,4,5,6}

P = {2,3,4,6}

V = {1,4,3,2}  
A = {1,4,5,6}

V = {1,3,4,2}  
R = {1,3,5,6}

V = {2,3,4,1}  
P = {2,3,4,6}

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R = {1,5,6,3}  
A = {1,5,6,4}

R = {3,6,1,5}  
P = {3,6,2,4}

R = {1,3,5,6}  
V = {1,3,4,2}

---

A = {1,4,5,6}  
V = {1,4,3,2}

A = {1,5,6,4}  
R = {1,5,6,3}

A = {4,6,1,5}  
P = {4,6,2,3}

---

P = {2,3,4,6}  
V = {2,3,4,1}

P = {3,6,2,4}  
R = {3,6,1,5}

P = {4,6,2,3}  
A = {4,6,1,5}

---

ARESTAS

V = {{2,4},{4,1},{1,3},{3,2}}  
A = {{4,6},{6,5},{5,1},{1,4}}  
R = {{1,5},{5,6},{6,3},{3,1}}  
P = {{2,4},{4,6},{6,3},{3,2}}

As Arestas sempre dividem duas faces e fazem o par para fechar o ciclo.

VERMELHO  $\rightarrow E_{24} = \{P, \text{V}\}, E_{41} = \{A, \text{V}\}, E_{13} = \{R, \text{V}\}, E_{32} = \{P, \text{V}\}$   
 AMARELO  $\rightarrow E_{46} = \{P, \text{A}\}, E_{65} = \{R, \text{A}\}, E_{51} = \{R, \text{A}\}, E_{14} = \{V, \text{A}\}$   
 ROXO  $\rightarrow E_{15} = \{A, \text{R}\}, E_{56} = \{A, \text{R}\}, E_{63} = \{P, \text{R}\}, E_{31} = \{V, \text{R}\}$   
 PRETO  $\rightarrow E_{24} = \{P, \text{V}\}, E_{46} = \{P, \text{A}\}, E_{63} = \{P, \text{R}\}, E_{32} = \{P, \text{V}\}$

Combinando para visualizar FACES MAIORES( combinação delas )

$V + A = \{\{2,4\},\{4,6\},\{6,5\},\{5,1\},\{1,3\},\{3,2\}\}$

$V + R = \{\{2,4\},\{4,1\},\{1,5\},\{5,6\},\{6,3\},\{3,2\}\}$

$V + P = \{\{2,4\},\{4,6\},\{6,3\},\{3,2\}\} \rightarrow \text{Aqui se perde } 1$

$A + V = \{\{2,4\},\{4,6\},\{6,5\},\{5,1\},\{1,3\},\{3,2\}\}$

$A + R = \{\{3,1\},\{1,4\},\{4,6\},\{6,3\}\} \rightarrow \text{Ao consideramos faces maiores(uniao de mais de uma face se perde valor(es) da regioao original, nesse caso o 5)}$

$A + P = \{\{2,4\},\{4,6\},\{6,3\},\{3,2\}\} \rightarrow \text{Aqui se perde } 1$

$R + V = \{\{2,4\},\{4,1\},\{1,5\},\{5,6\},\{6,3\},\{3,2\}\}$

$R + A = \{\{3,1\},\{1,4\},\{4,6\},\{6,3\}\} \rightarrow \text{Aqui se perde } 5$

$R + P = \{\{2,4\},\{4,6\},\{6,5\},\{5,1\},\{1,3\},\{3,2\}\}$

$P + V = \{\{2,4\},\{4,6\},\{6,3\},\{3,2\}\}$

$P + A = \{\{2,4\},\{4,6\},\{6,3\},\{3,2\}\}$

$P + R = \{\{2,4\},\{4,6\},\{6,5\},\{5,1\},\{1,3\},\{3,2\}\}$

Ciclo que mantém a propriedade sem incluir valor dos vértices perdidos