

Re: A graph theory problem

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- *From:* "Aldar C-F. Chan" <aldar@xxxxxxxxxxxxxxxxxxxx>
 - *Date:* Sat, 4 Jun 2005 01:55:25 GMT
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>>Hi, I got the following edge labeling problem. Help is greatly
>>appreciated.

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>>Given a graph G , label its edges $E(G)$ with $1,2,3,\dots$ so that
>>each vertex in $V(G)$ has at most k labels. Find a labeling
>>method which achieve the minimum number of labels. If this
>>problem hard?

>

> You can't have described the problem correctly. Perhaps you meant
> "at least" rather than "at most"?

>

> Robert Israel israel@xxxxxxxxxxxx

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Sorry. I didn't check it carefully. I meant at most but want to
achieve minimum number of repetitions per label.

Overall, I want to label the edges of a graph G with $1,2,3,\dots$ so that
each vertex in $V(G)$ has at most k labels. Denote a label by l_i and
let $N(l_i)$ be the number of repetitions of the label l_i . Find a labeling
method so that $\max_i N(l_i)$ is minimum. What's the $\max_i N(l_i)$?
Thanks.

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- *References:*
 - ◆ [A graph theory problem](#)
 - ◇ *From:* Aldar Chan
 - ◆ [Re: A graph theory problem](#)

Re: A graph theory problem

◇ *From:* Robert Israel

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