

Cycles In a Graph - Prob 10.30

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```
library(magrittr)
dat = strsplit("0 1 0 1 0 1 0 0 0 0 0 1 1 0 0 0 0 1 0 1 1 0 1 0 0",split=" ")
dat = dat[[1]] %>% as.numeric()
A = matrix(dat,ncol=5,nrow=5)
A
```

```
##      [,1] [,2] [,3] [,4] [,5]
## [1,]    0    1    0    0    1
## [2,]    1    0    1    0    0
## [3,]    0    0    1    1    1
## [4,]    1    0    0    0    0
## [5,]    0    0    0    1    0
```

```
library(matrixcalc)
sum(diag(matrix.power(A,10)))
```

```
## [1] 208
```