# Attestor Report

August 14, 2019

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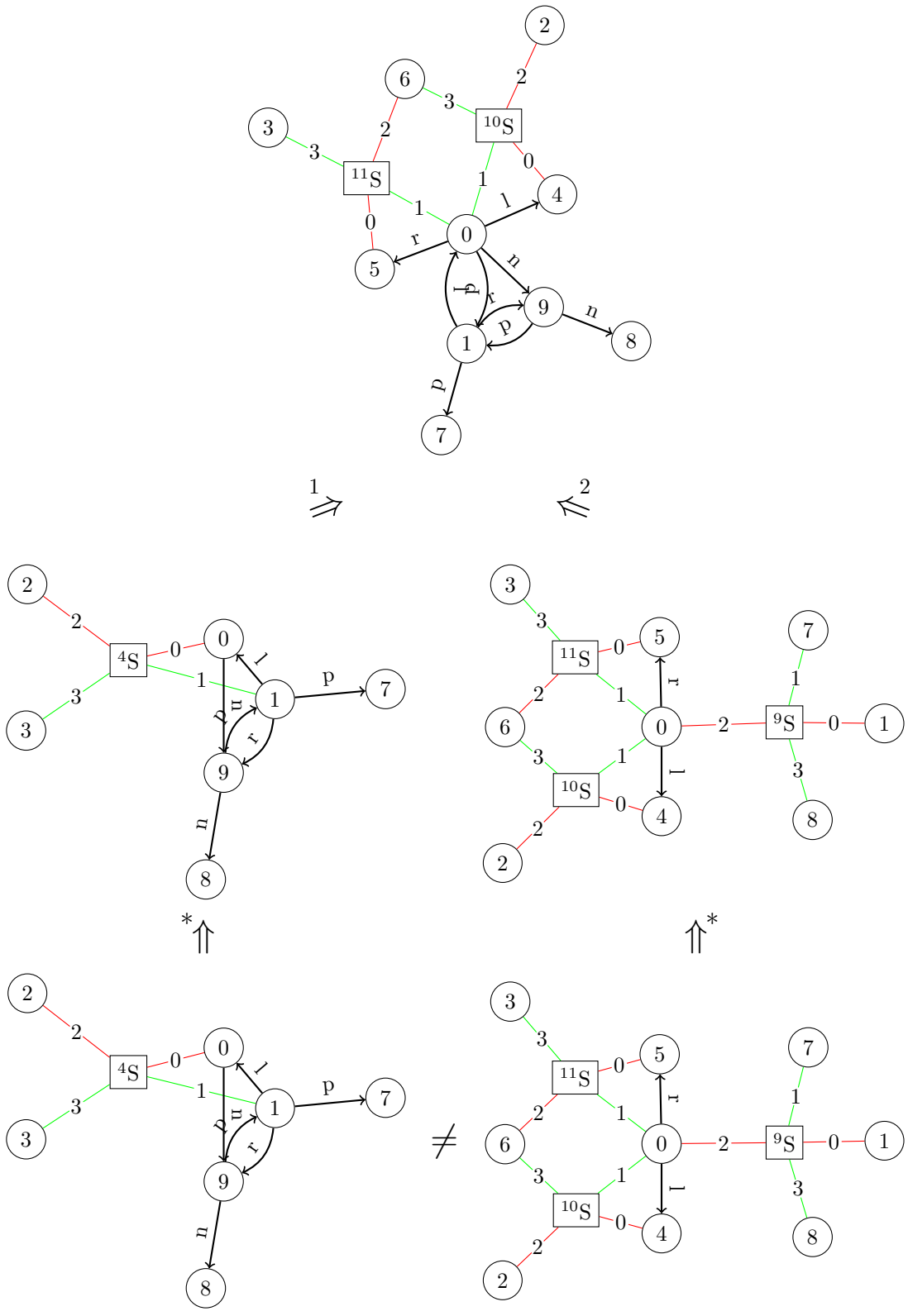
# 1 Critical Pair Report

## 1.1 Critical Pair (Not Joinable)



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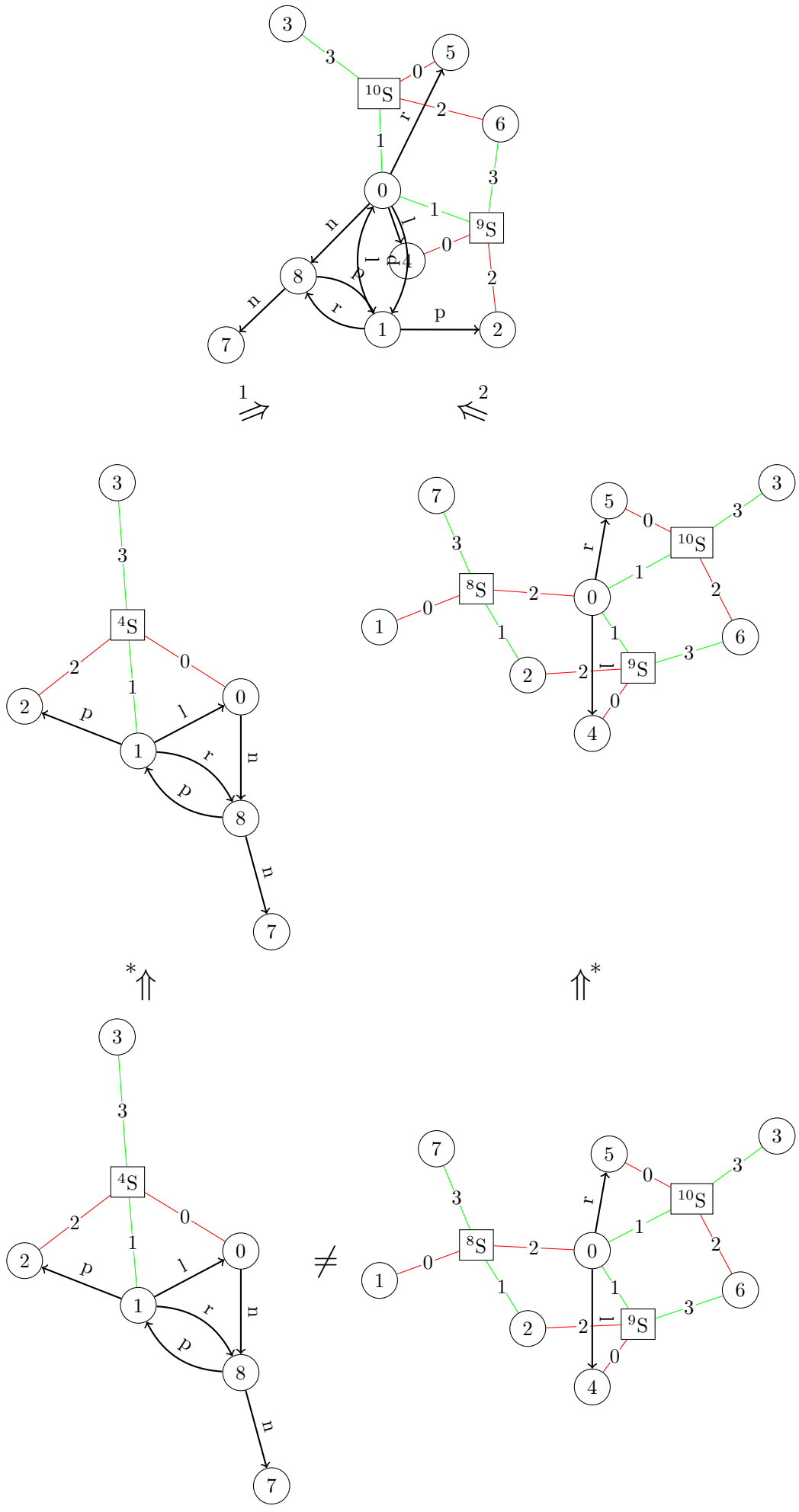





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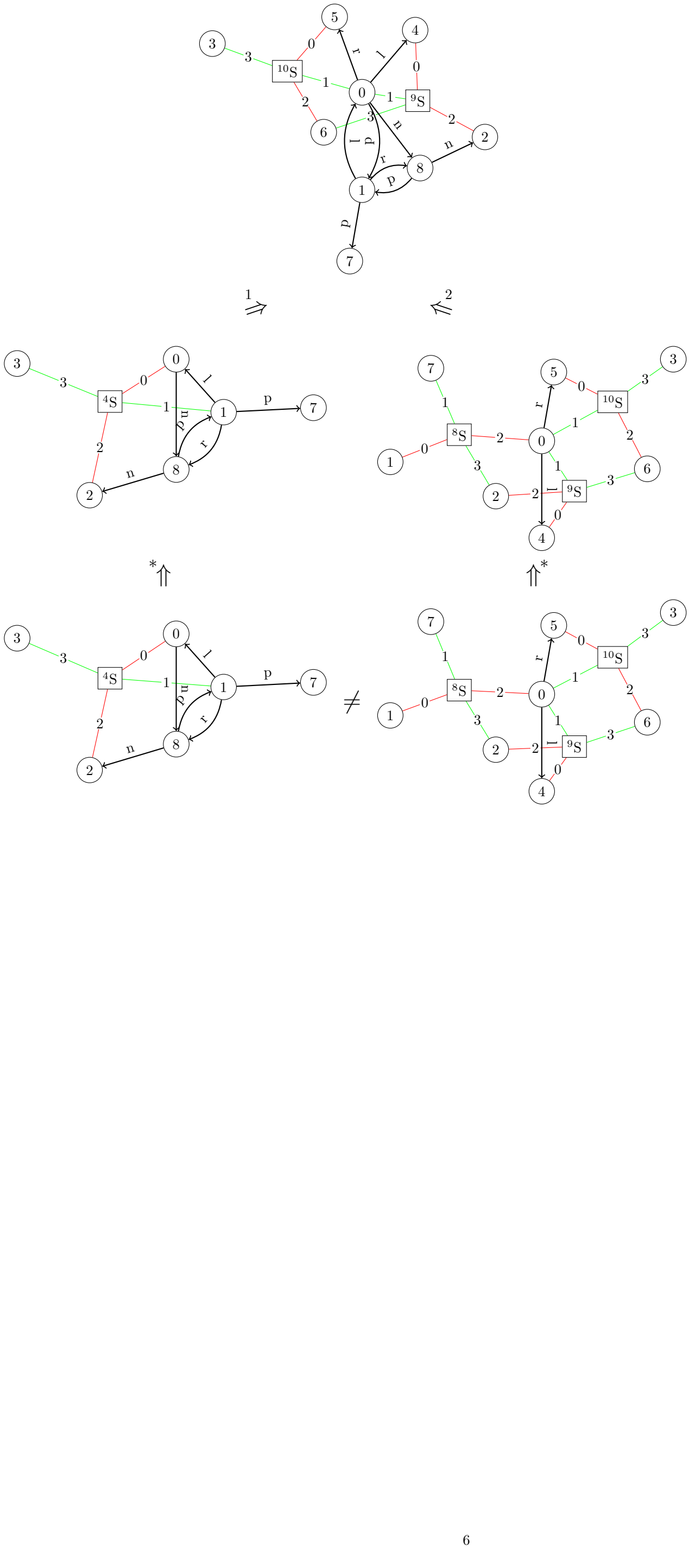

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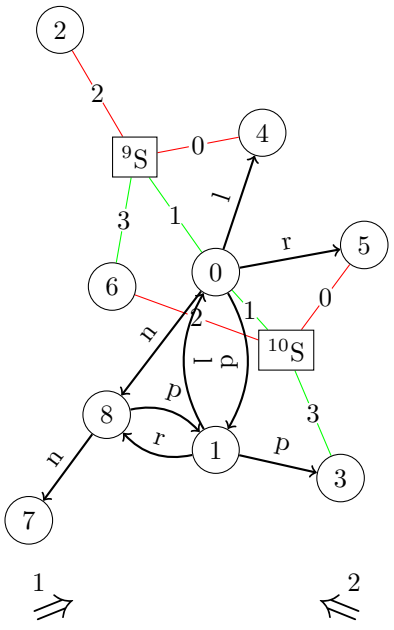


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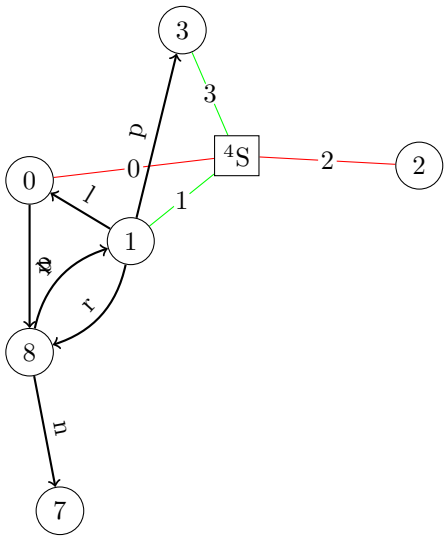


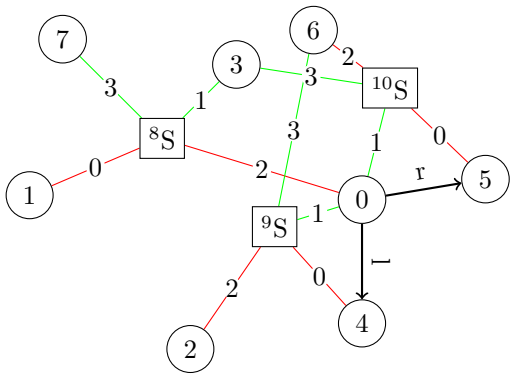


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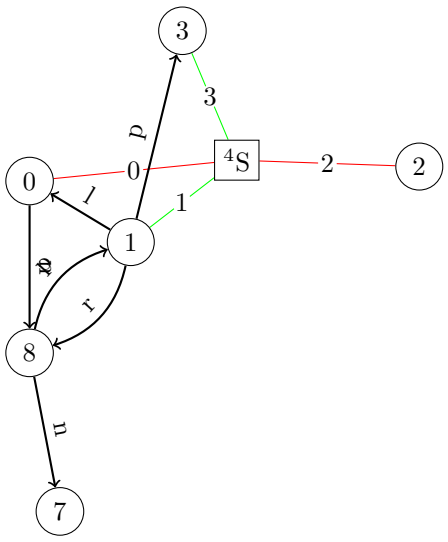


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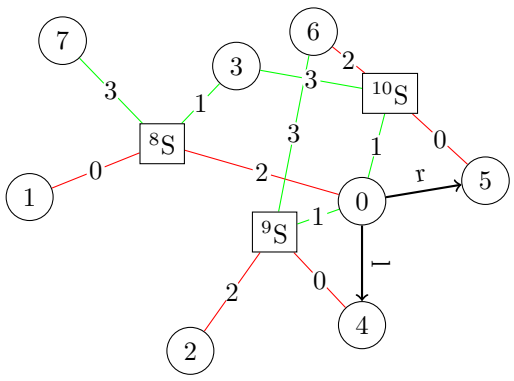

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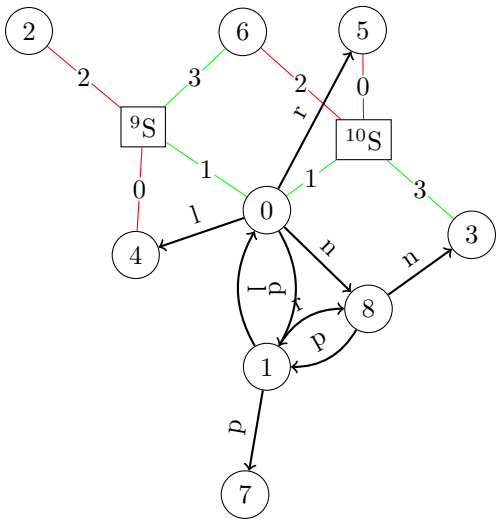

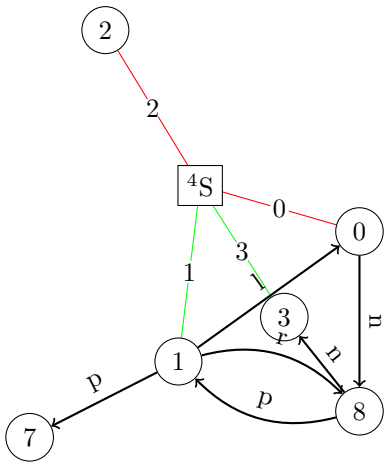


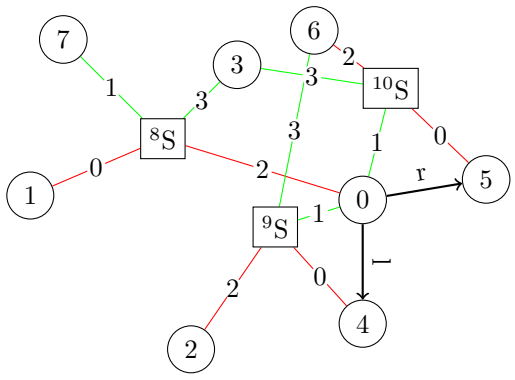


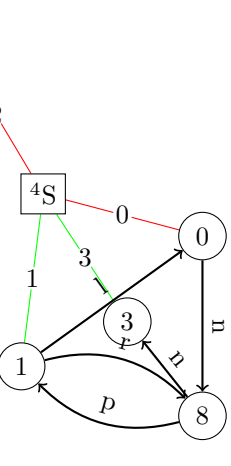


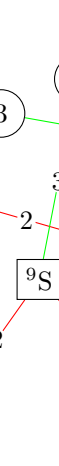

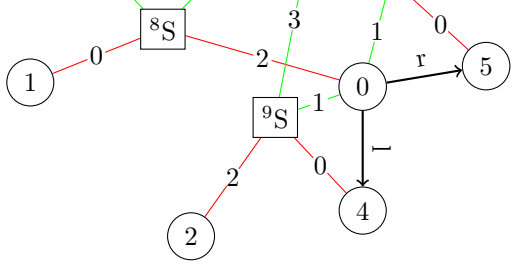

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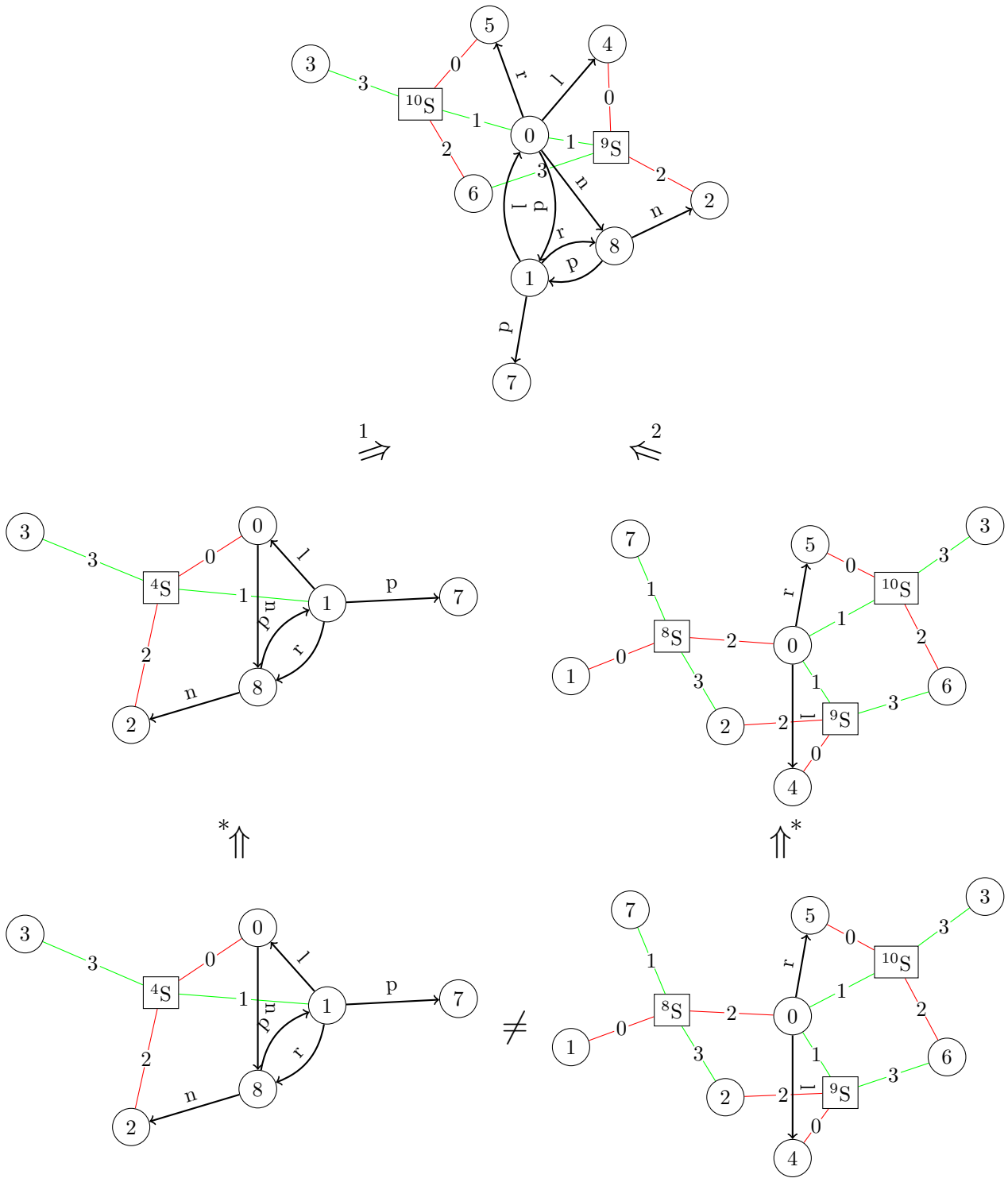

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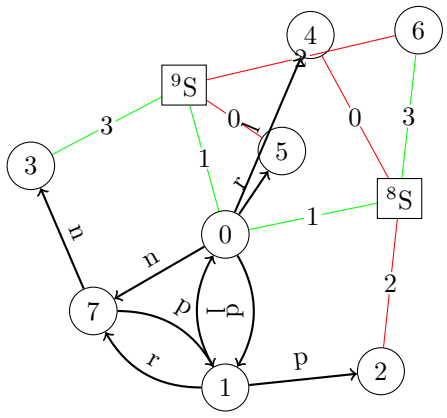
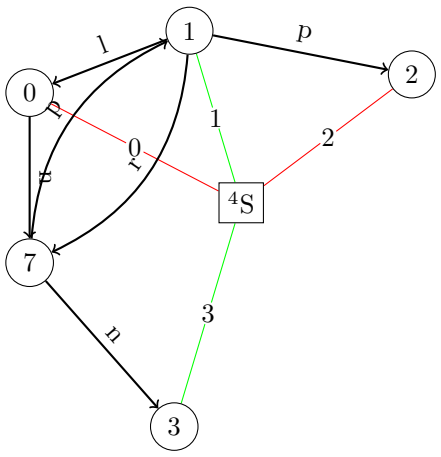
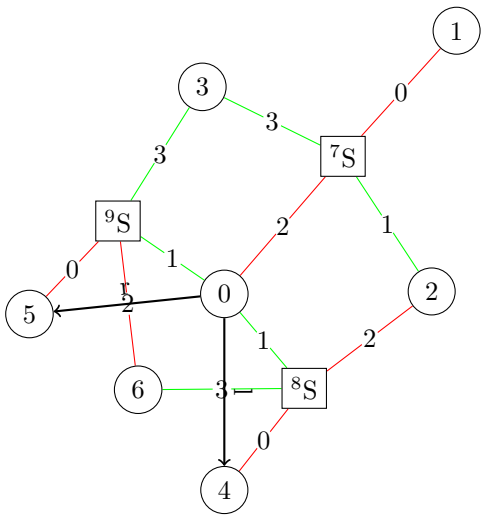



1 ⇛ 2 ⇚

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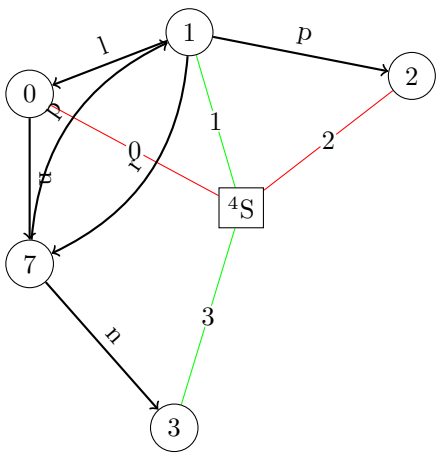


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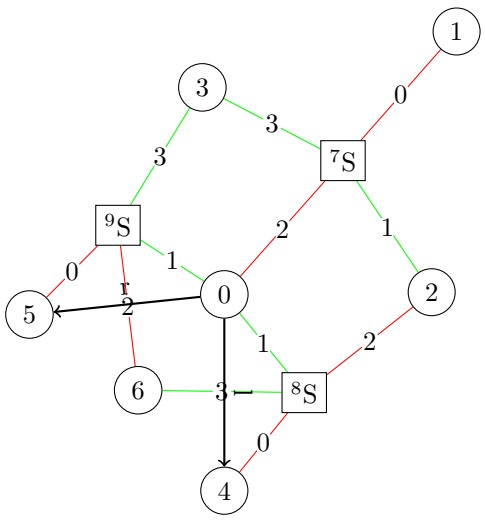
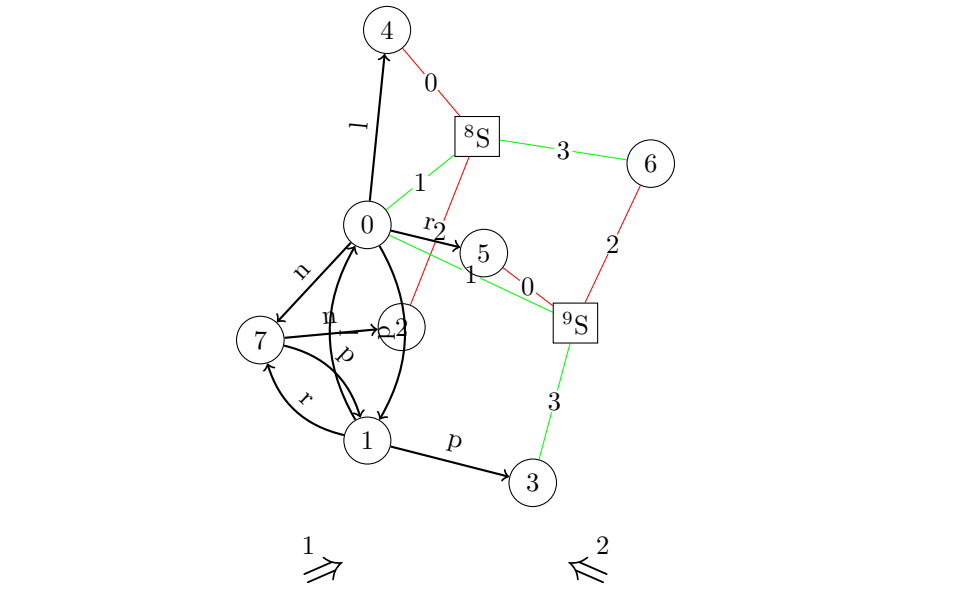
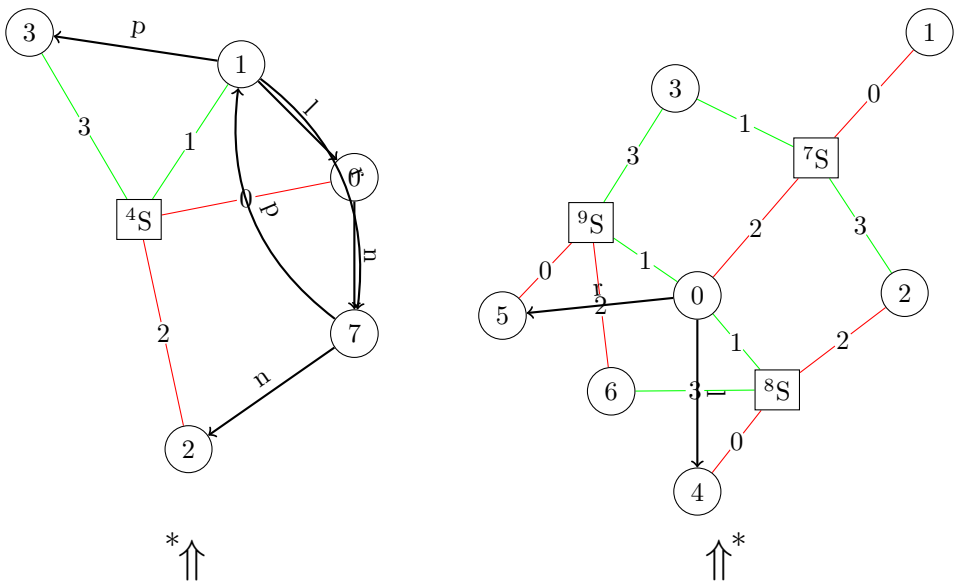
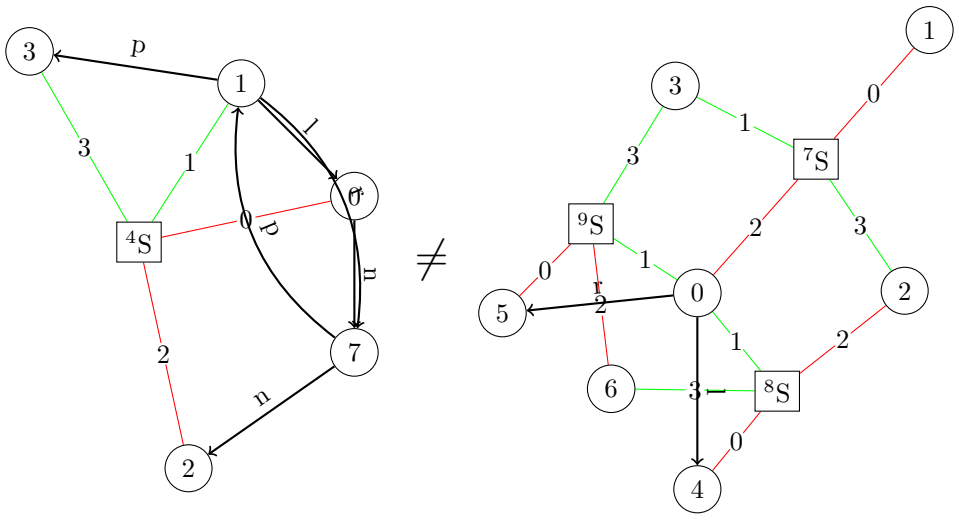


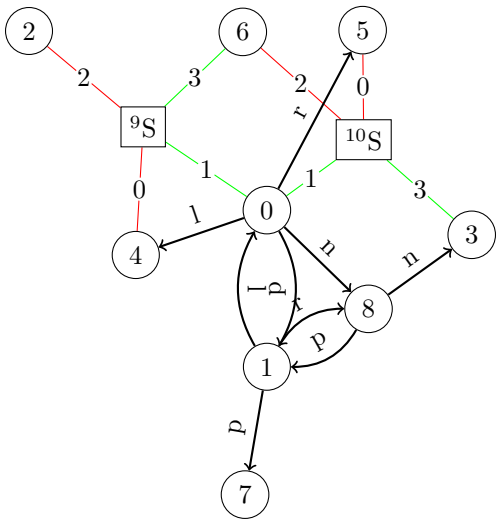
### 1.8 Critical Pair (Not Joinable)



### 1.9 Critical Pair (Not Joinable)

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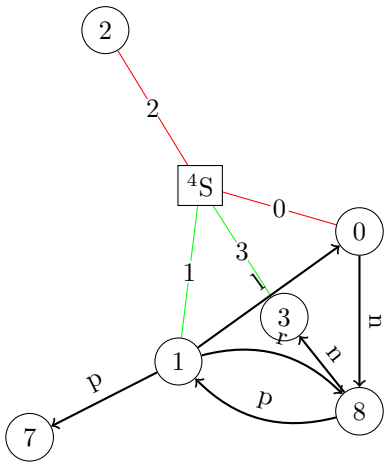


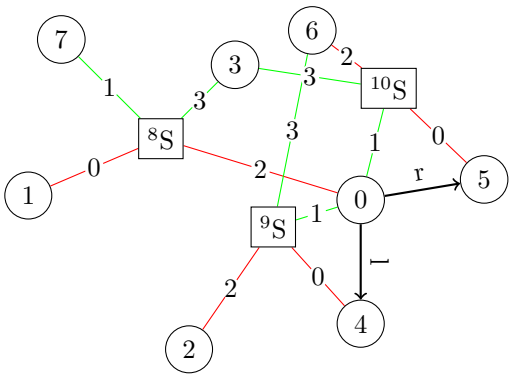


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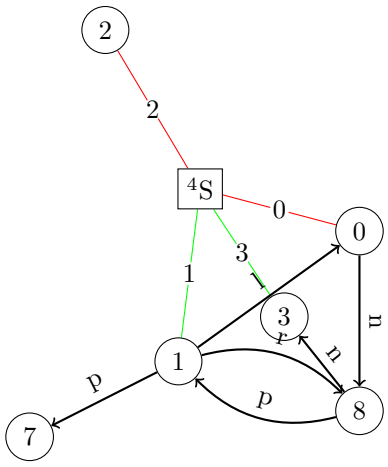


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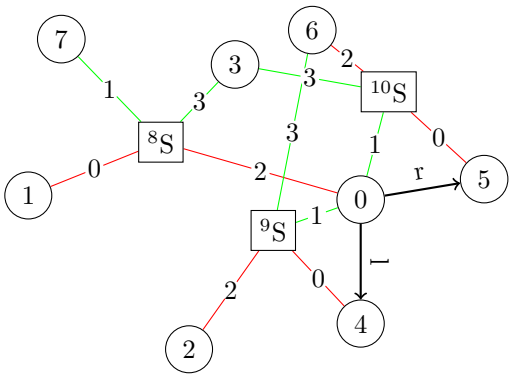
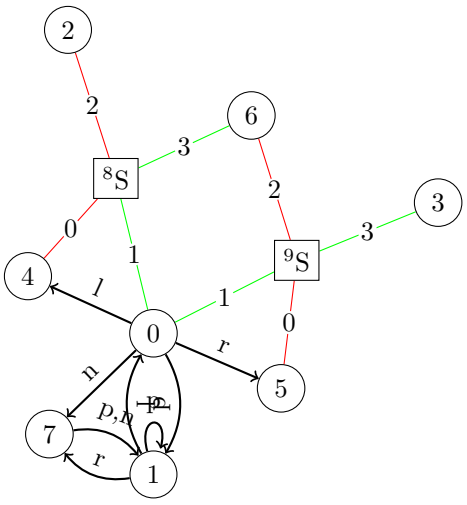
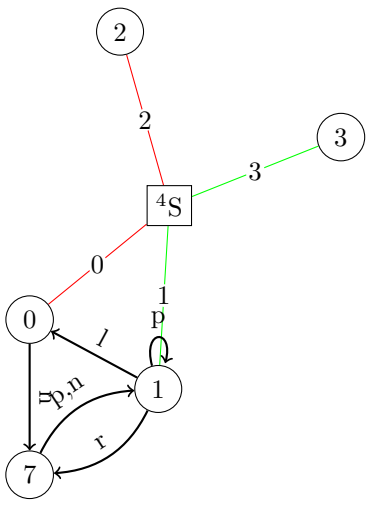


### 1.10 Critical Pair (Not Joinable)




1 ⇛ 2.1

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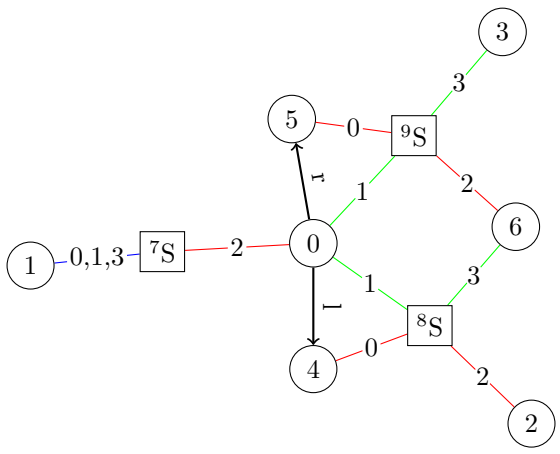


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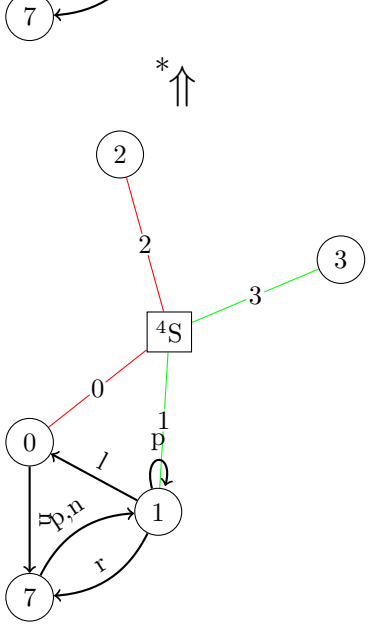


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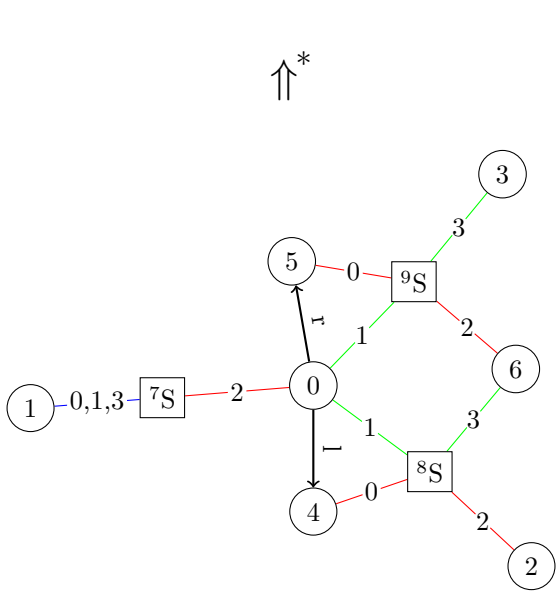
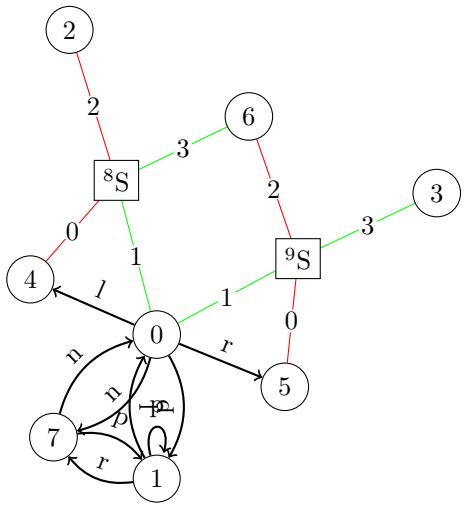
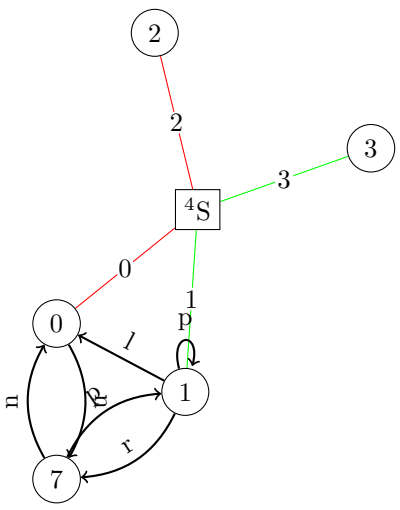
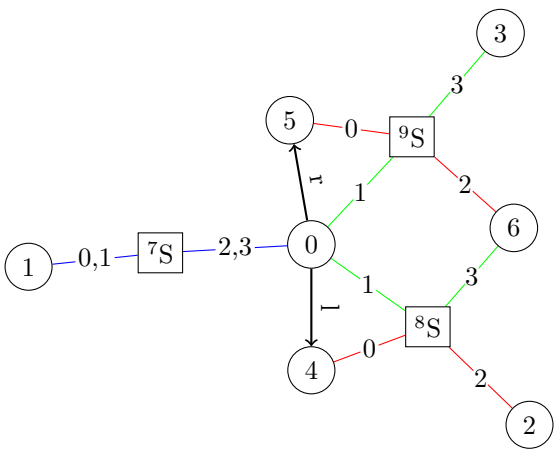


### 1.11 Critical Pair (Not Joinable)




1 2.2

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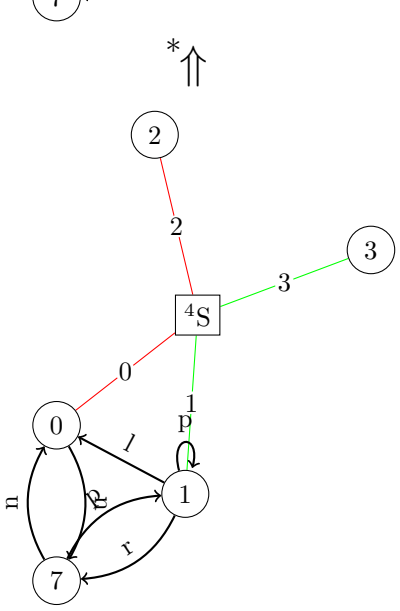


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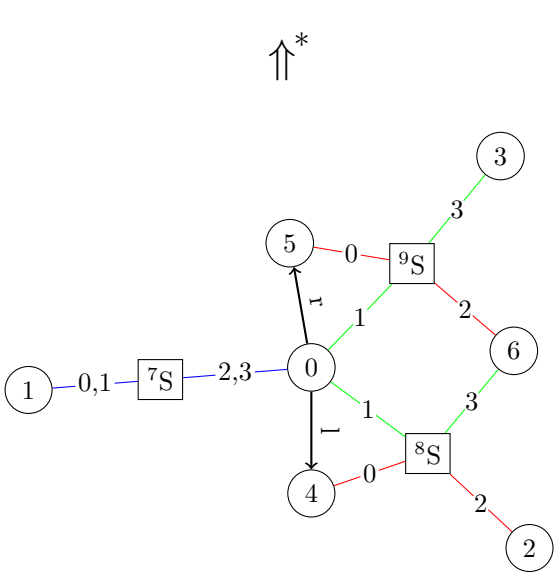

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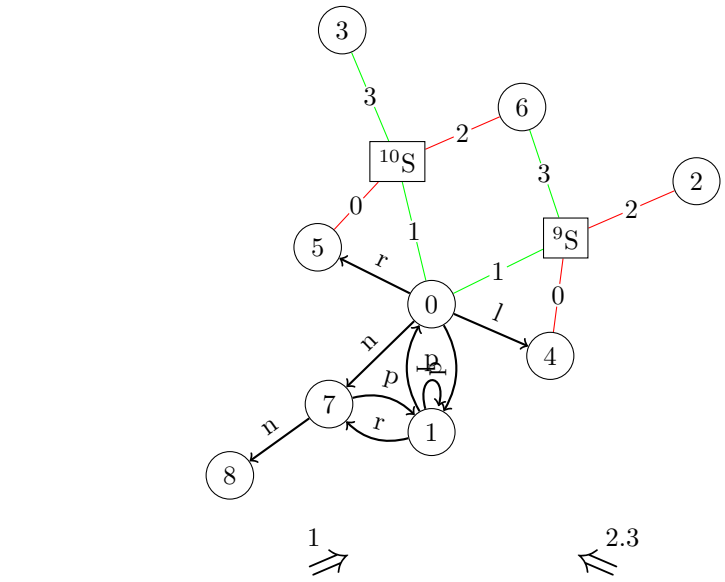
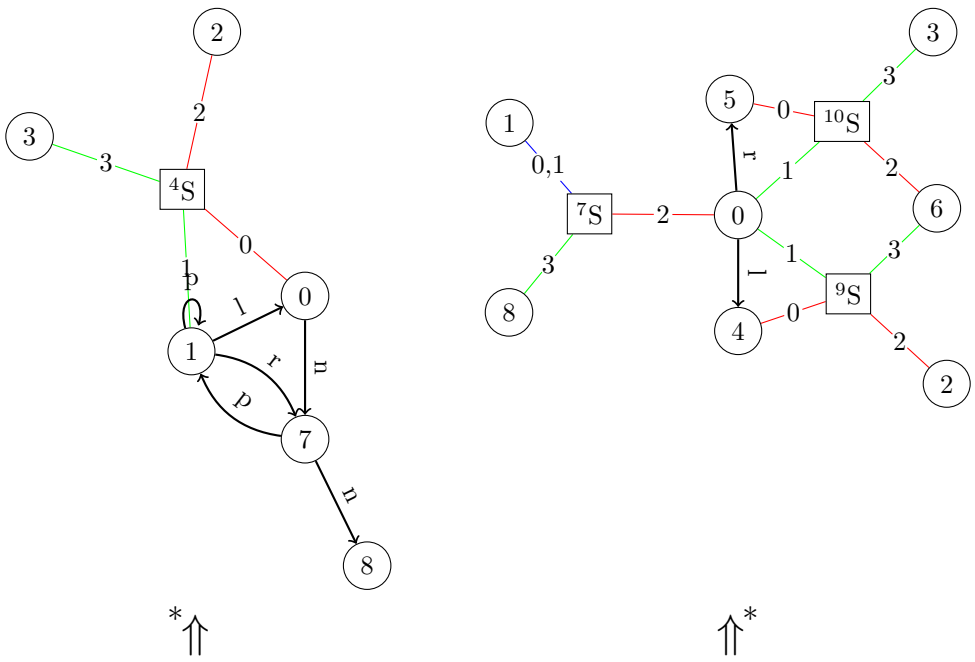



1 ⇉ 2.3

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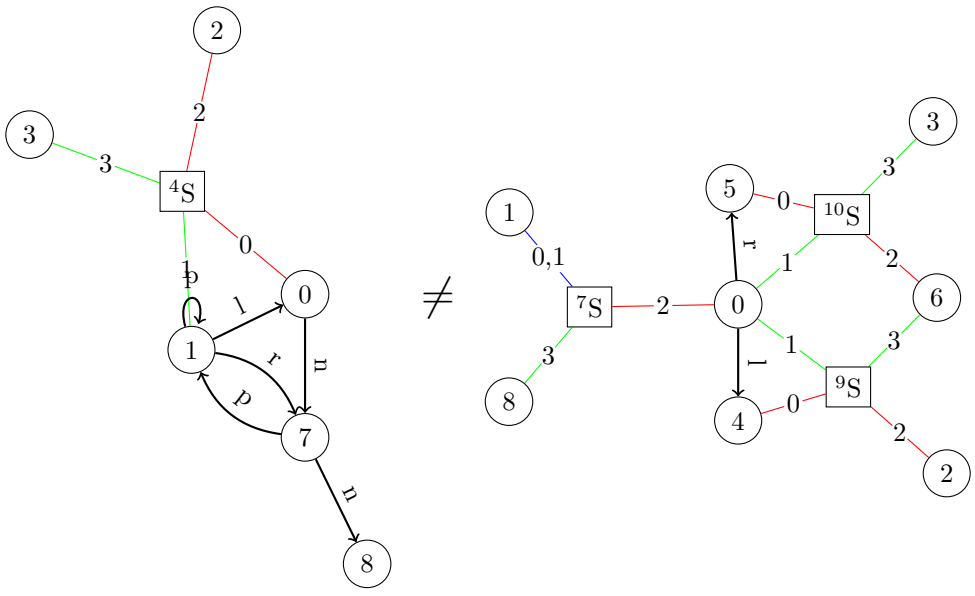
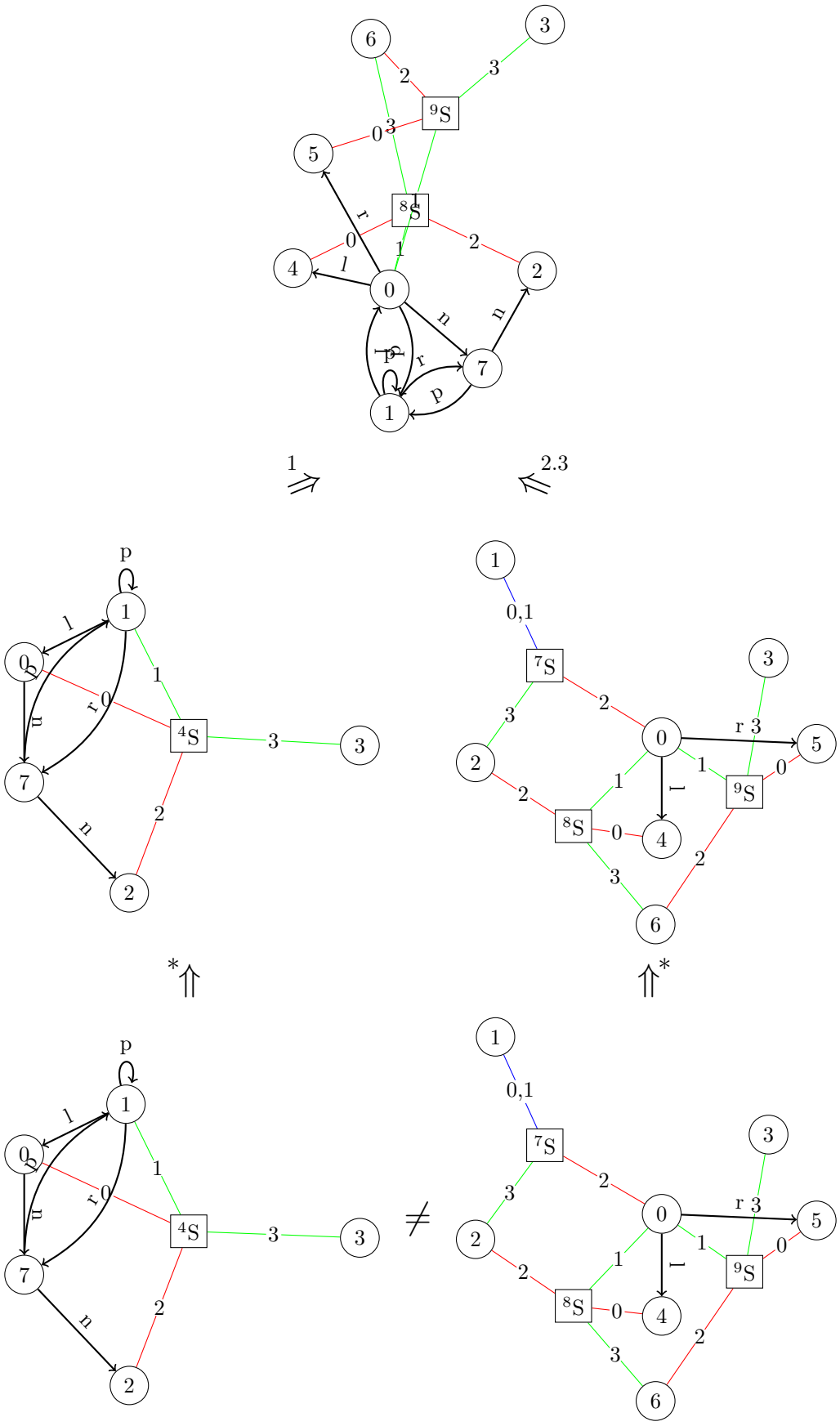


### 1.13 Critical Pair (Not Joinable)



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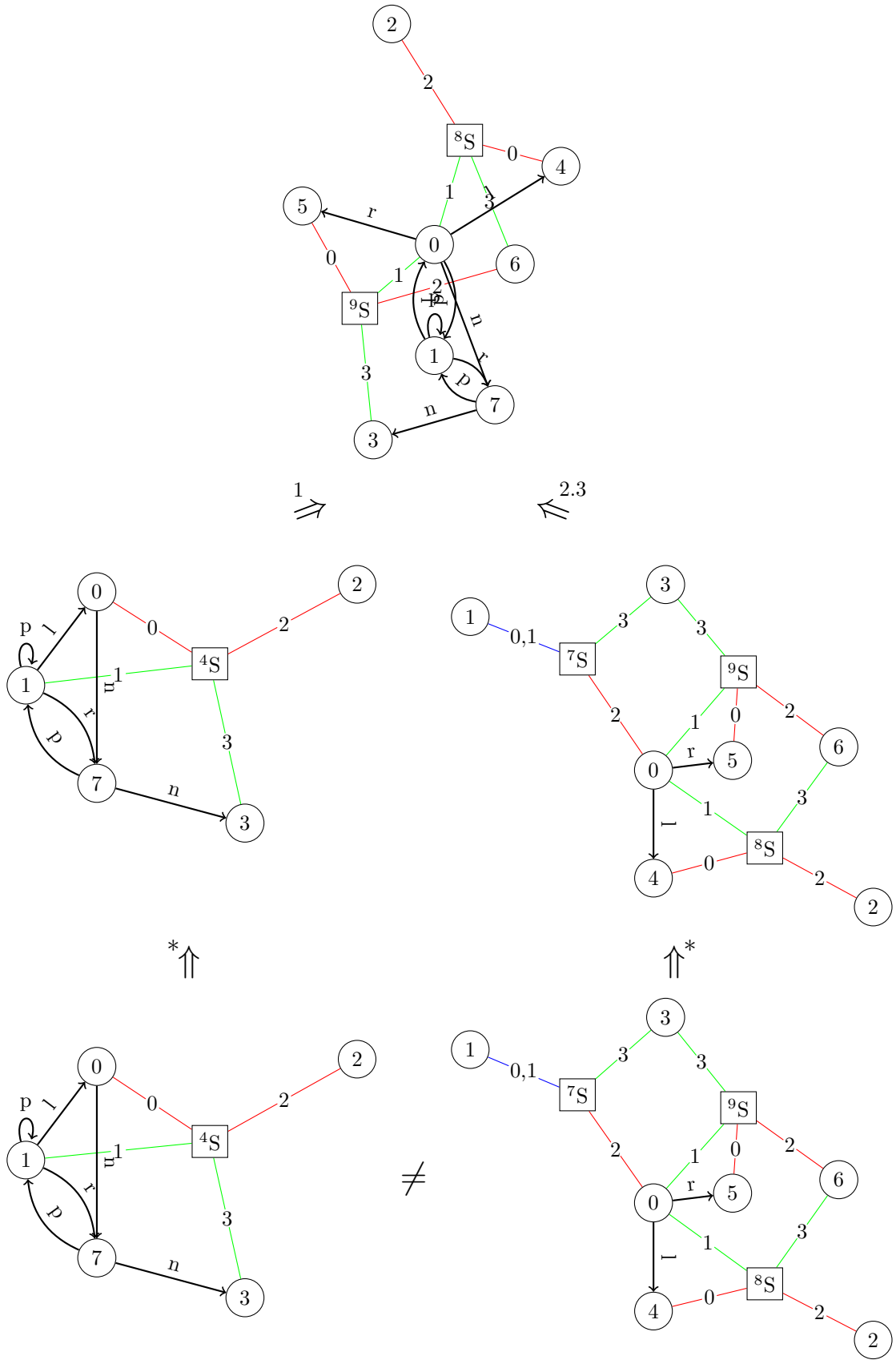


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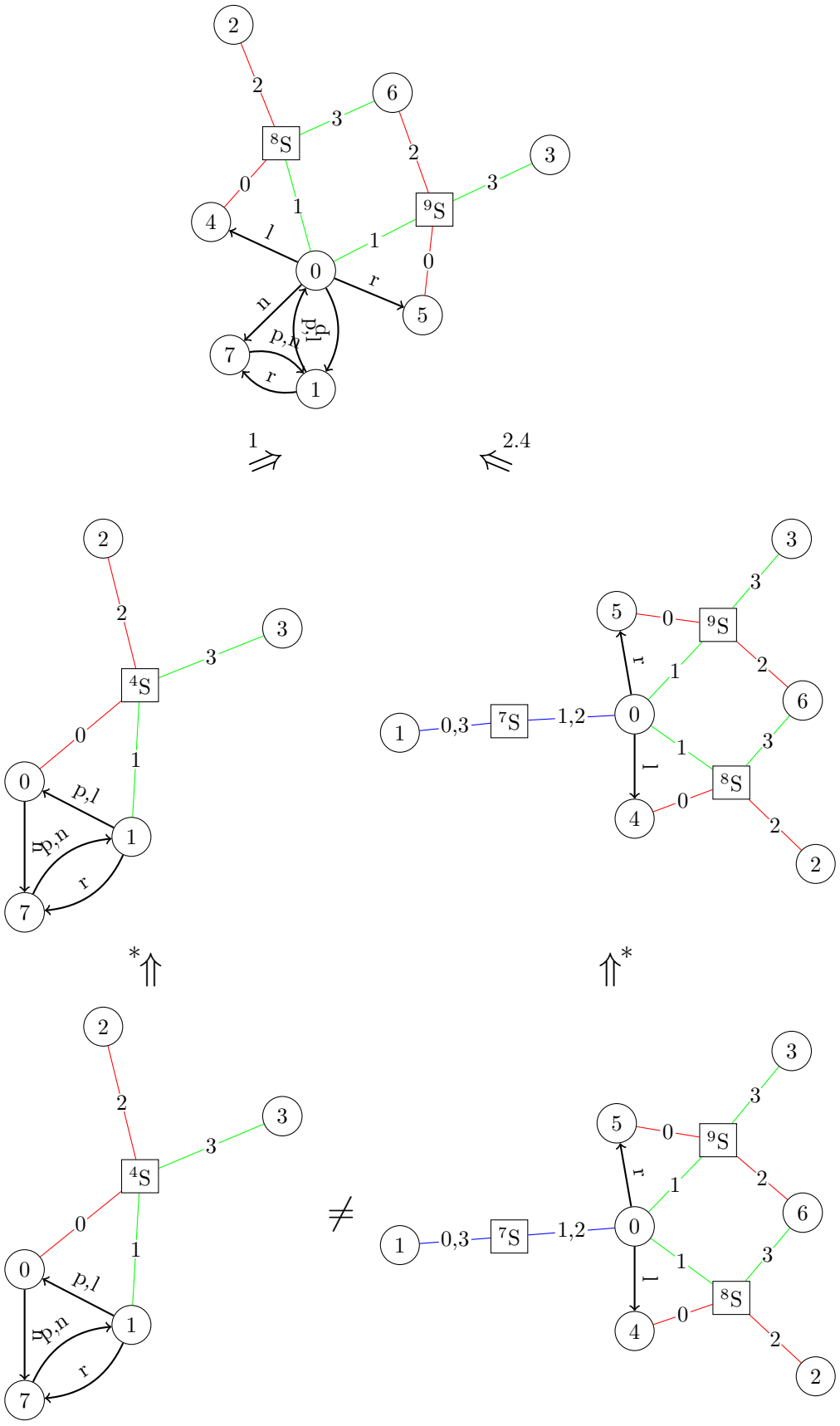
### 1.15 Critical Pair (Not Joinable)



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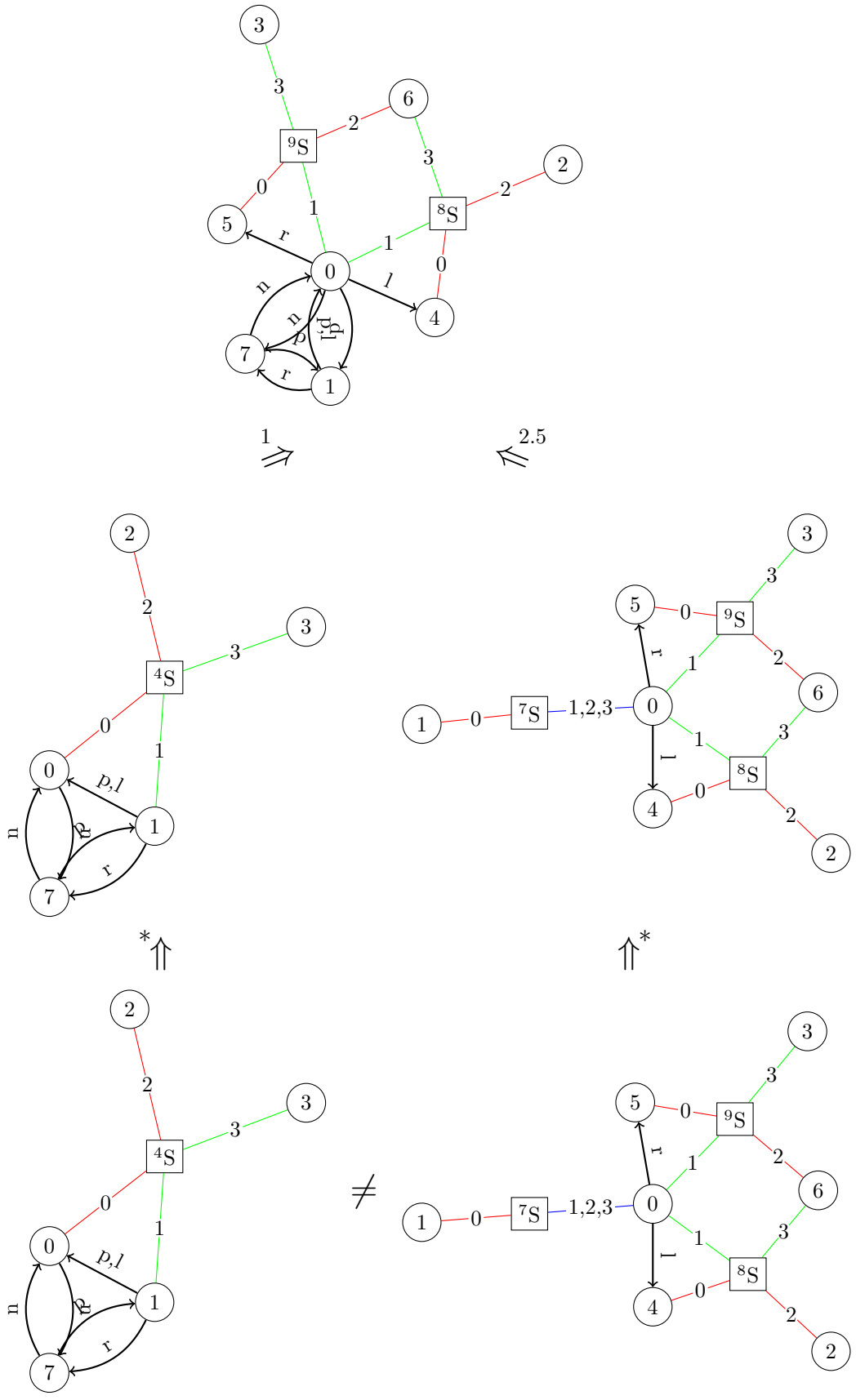
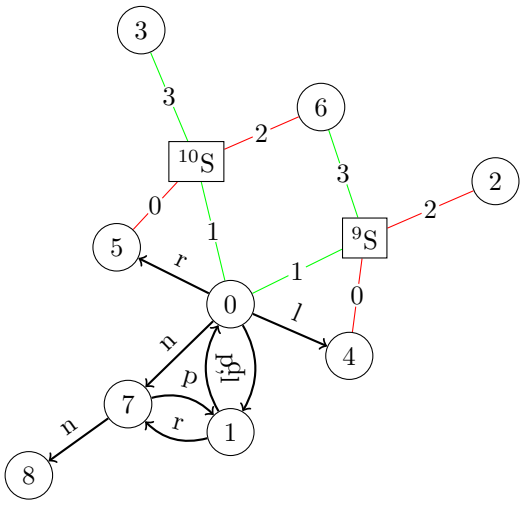
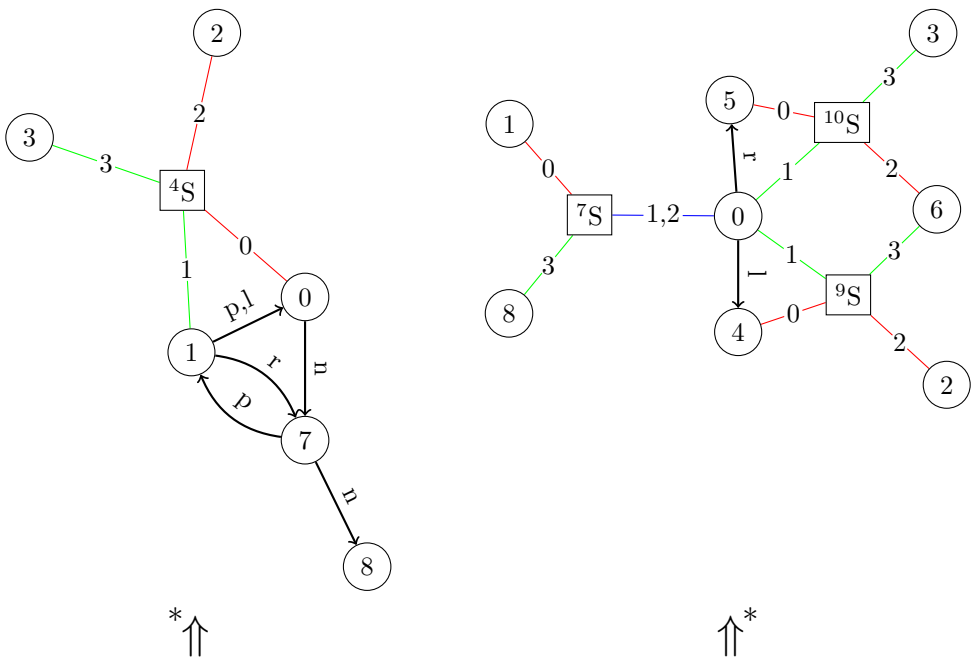


### 1.17 Critical Pair (Not Joinable)




1 ⇒ 2.6

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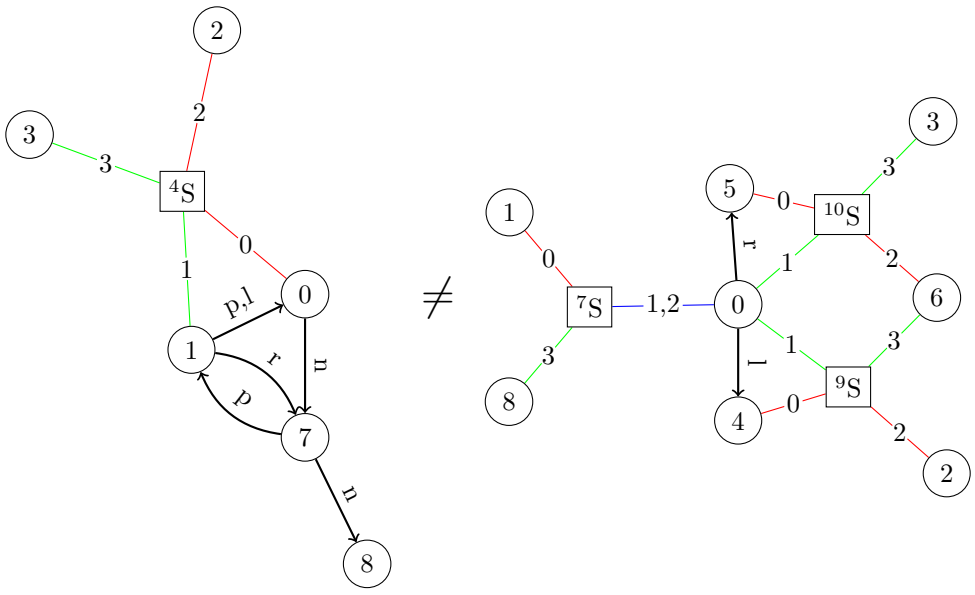
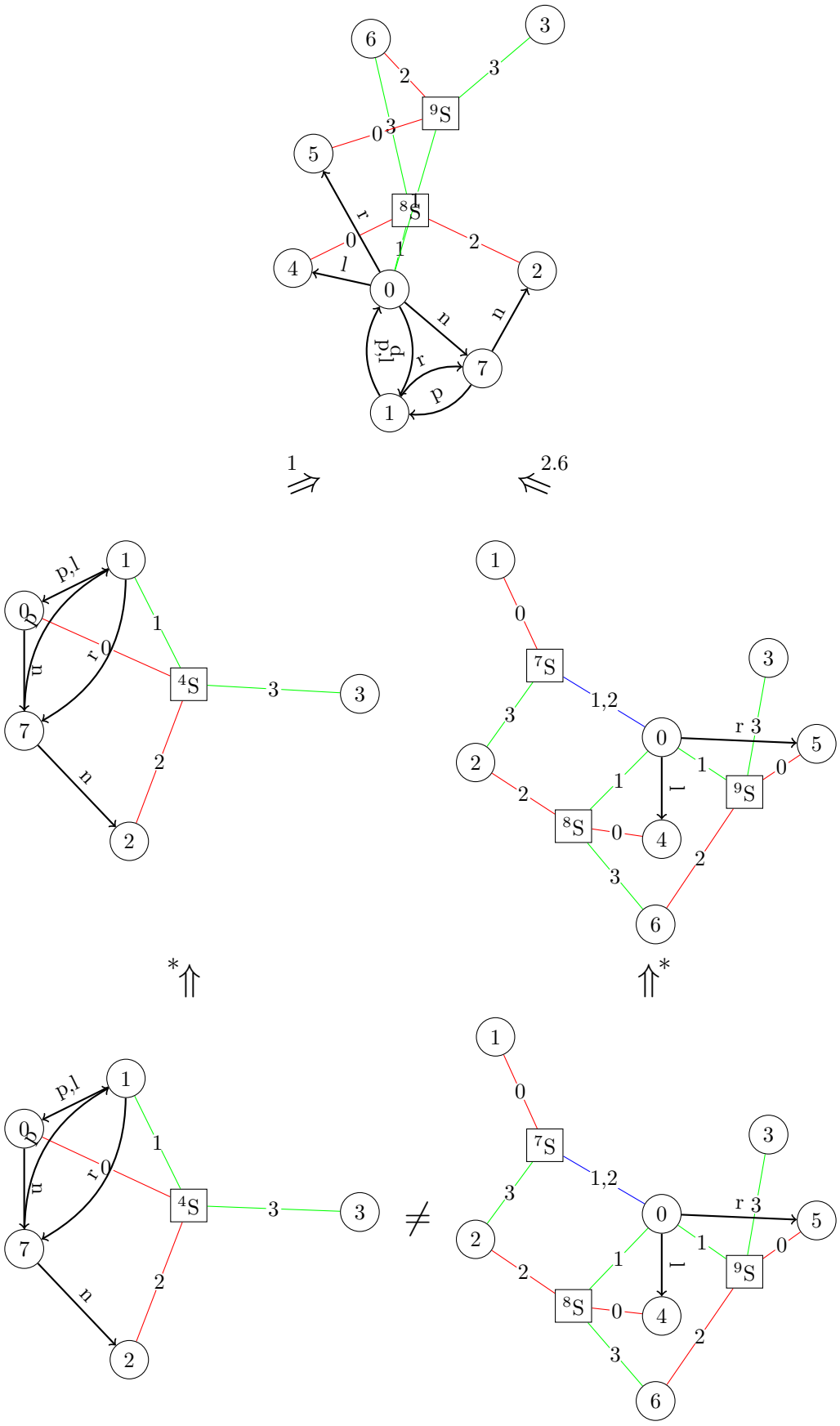
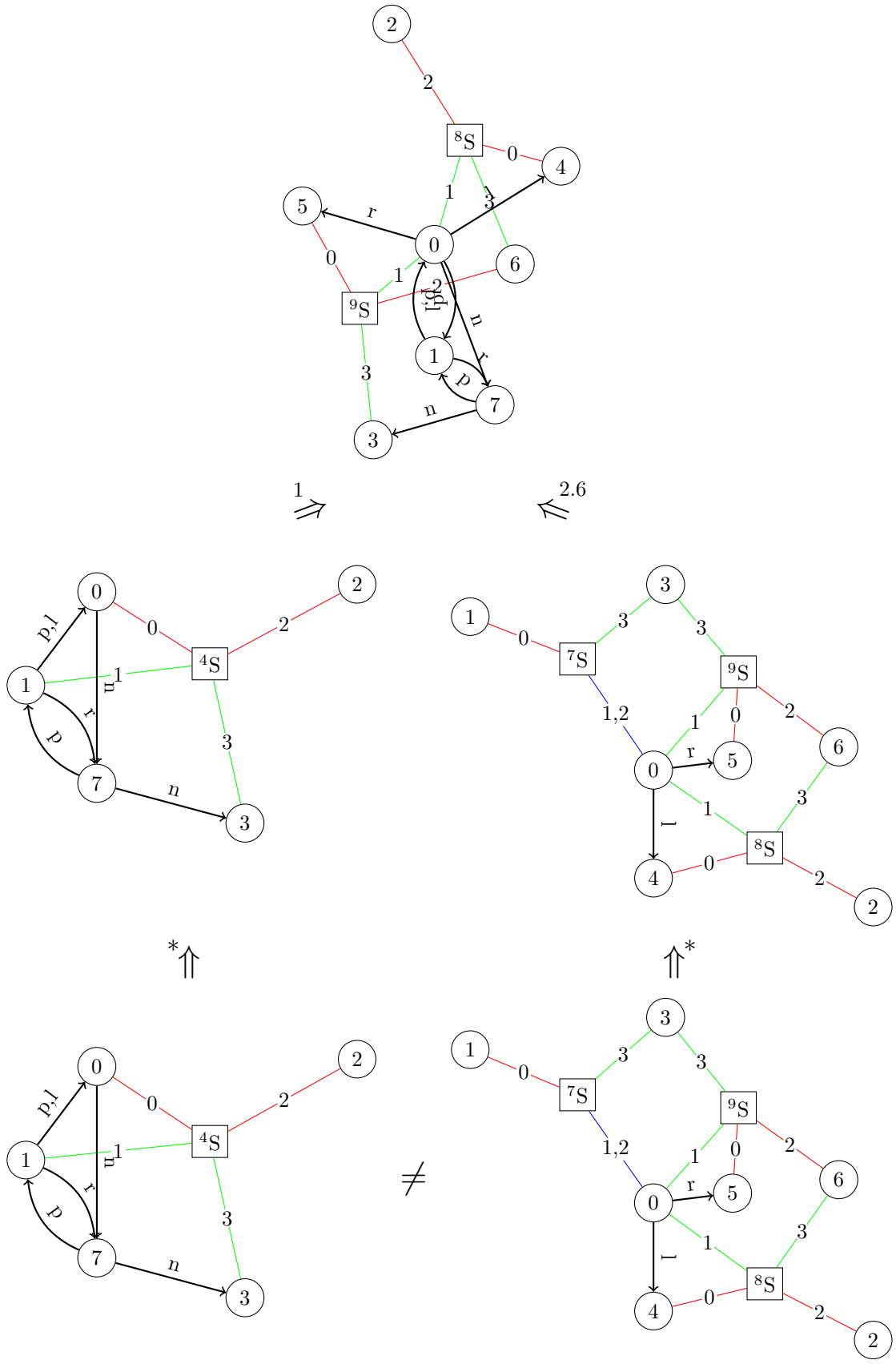


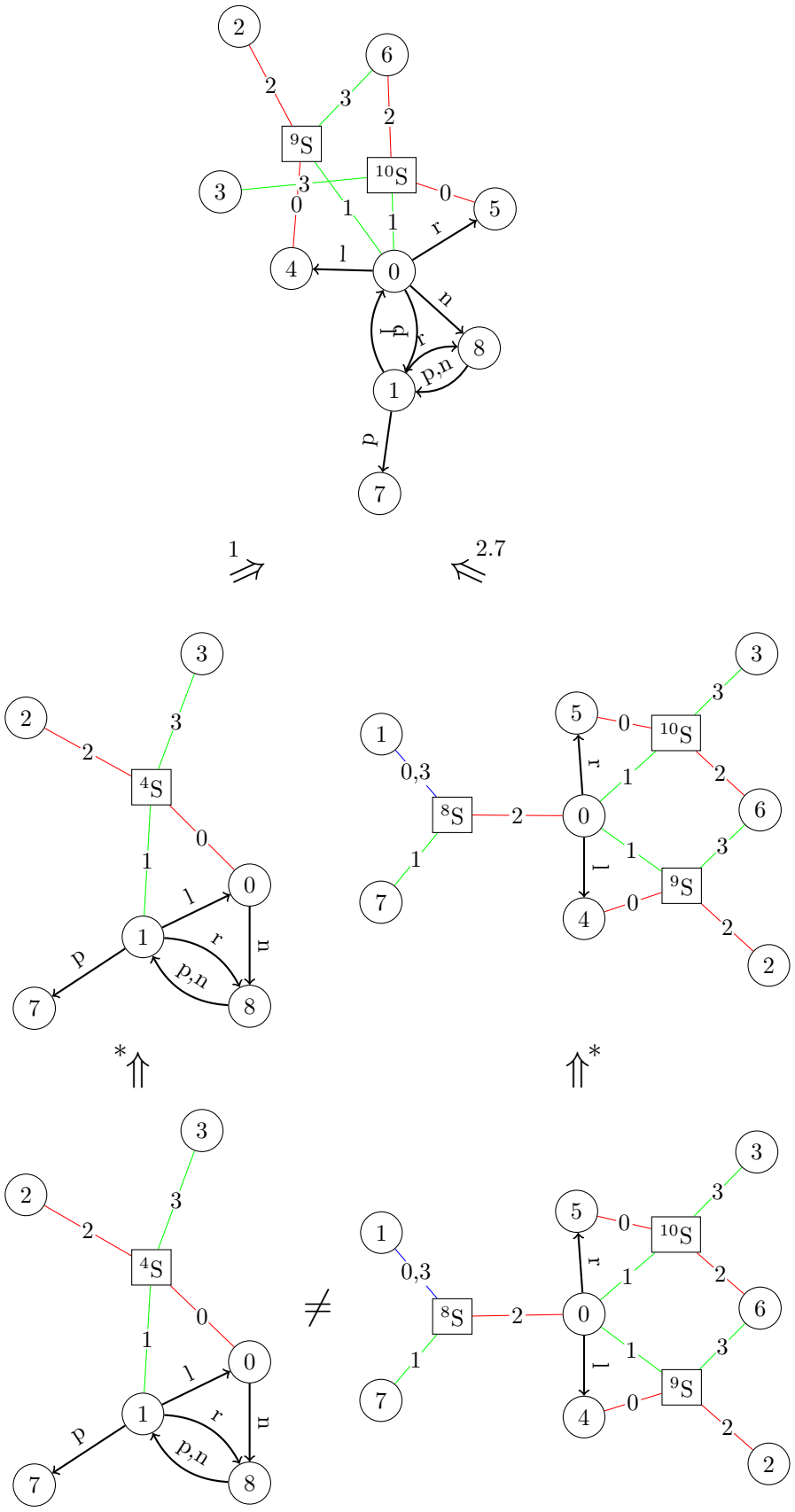
### 1.18 Critical Pair (Not Joinable)



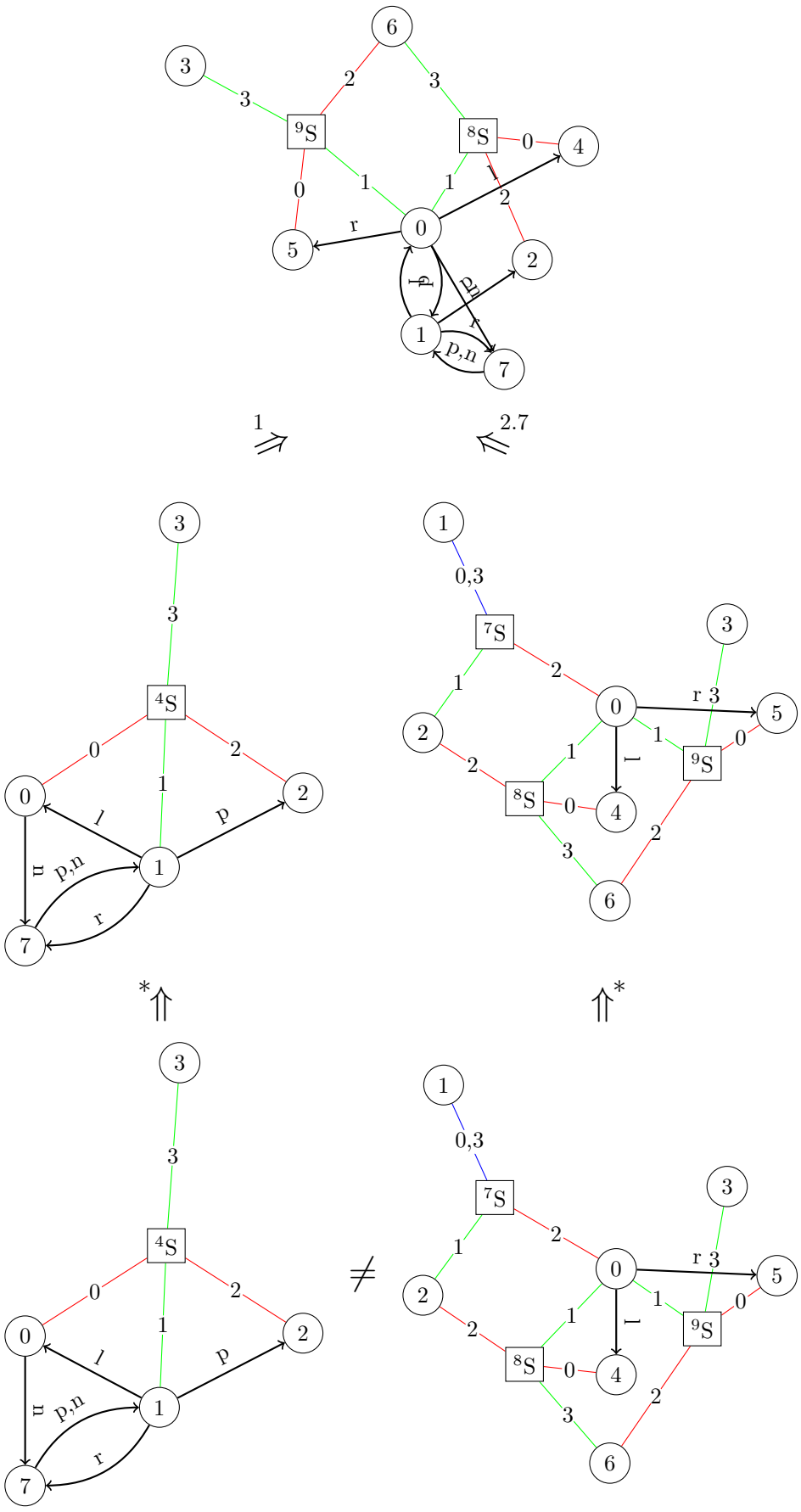
### 1.19 Critical Pair (Not Joinable)



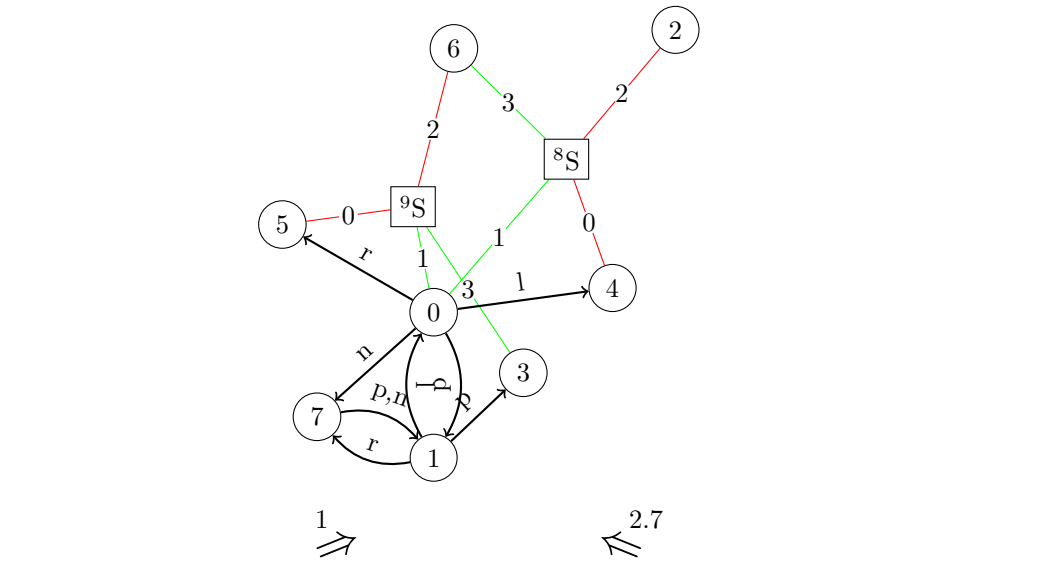
## 1.20 Critical Pair (Not Joinable)



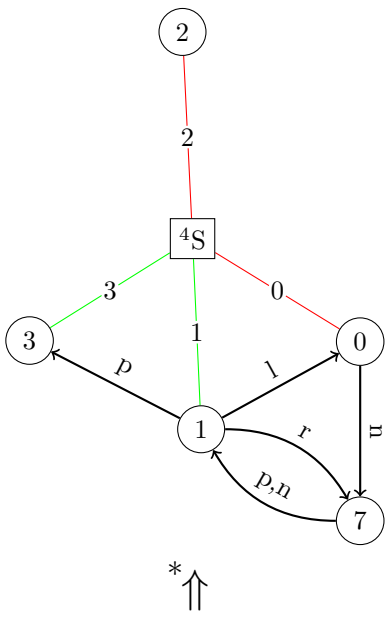
## 1.21 Critical Pair (Not Joinable)

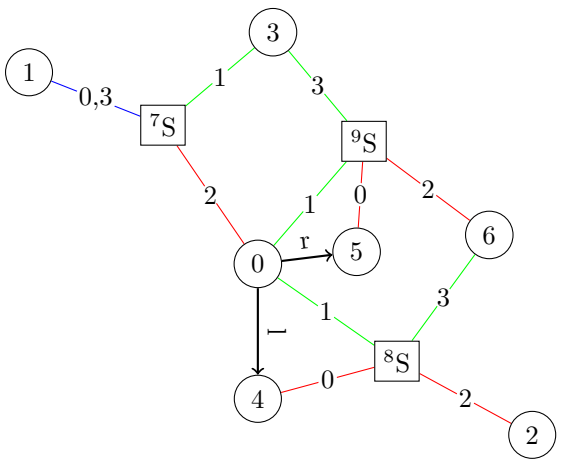


## 1.22 Critical Pair (Not Joinable)




1 ≫ ≪ 2.7

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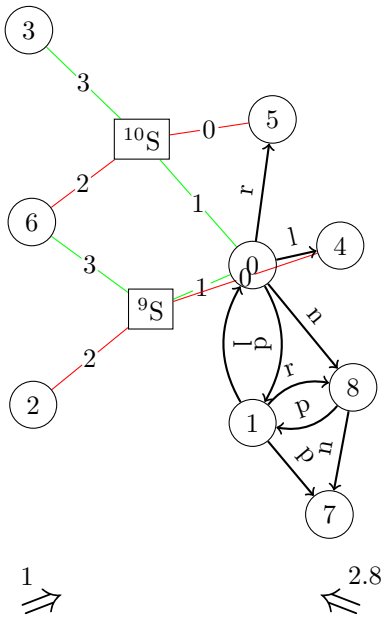
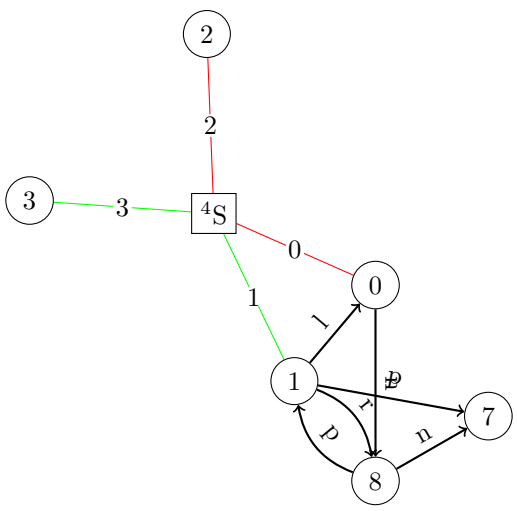
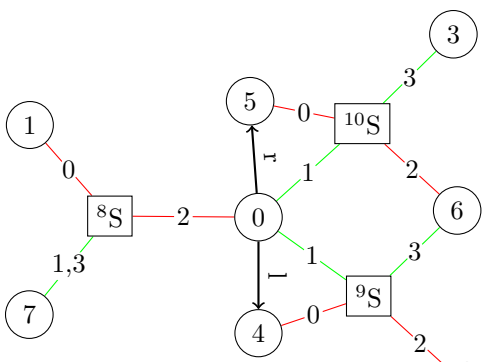
### 1.23 Critical Pair (Not Joinable)




1 ⇉ 2.8 ⇇

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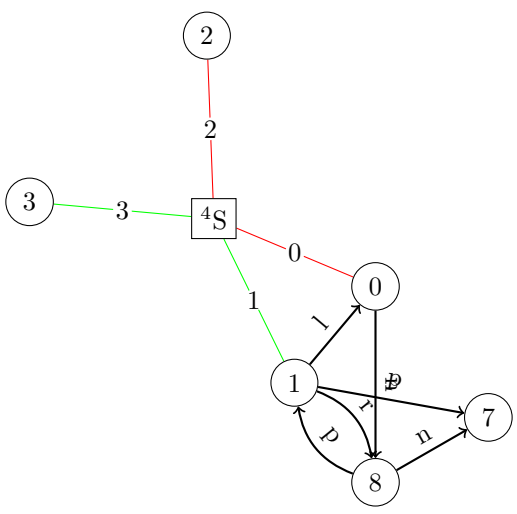


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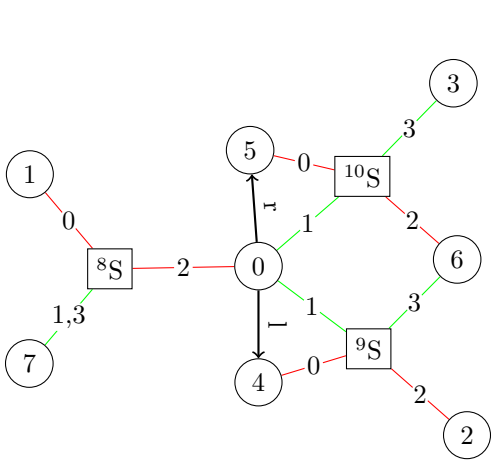
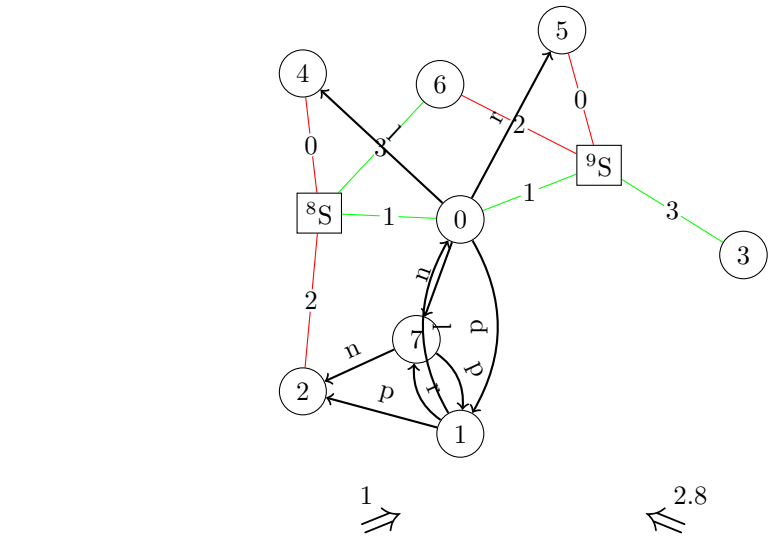
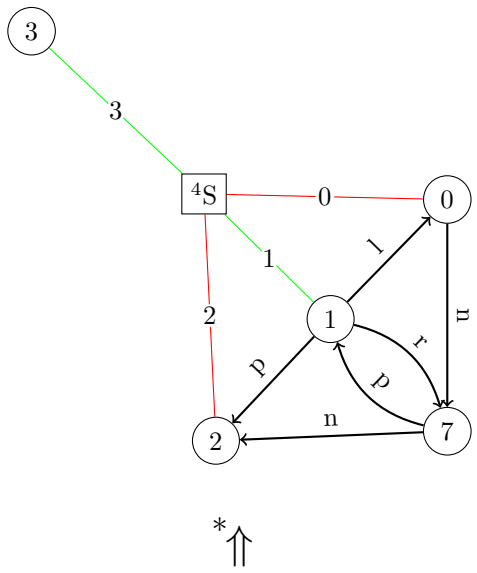


### 1.24 Critical Pair (Not Joinable)




1 ≫ ≪ 2.8

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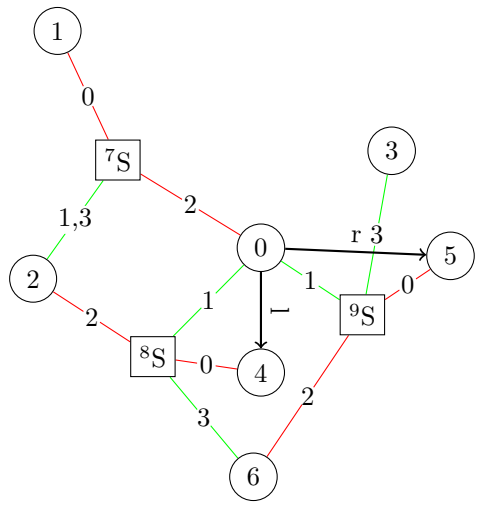


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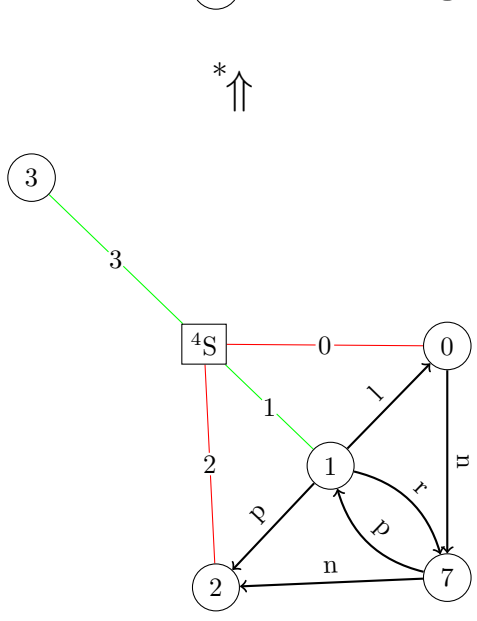


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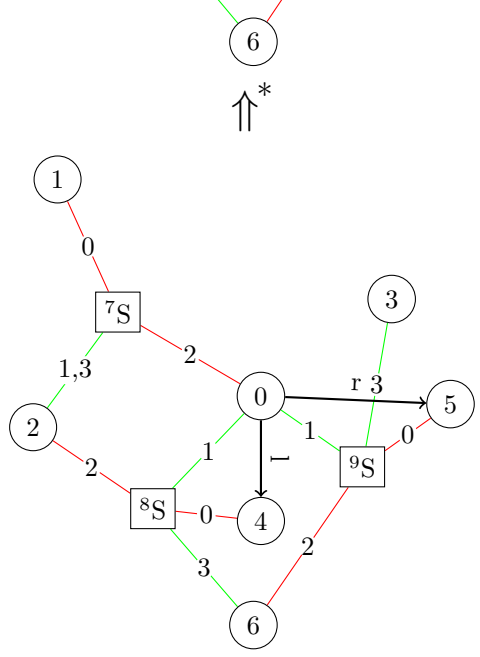
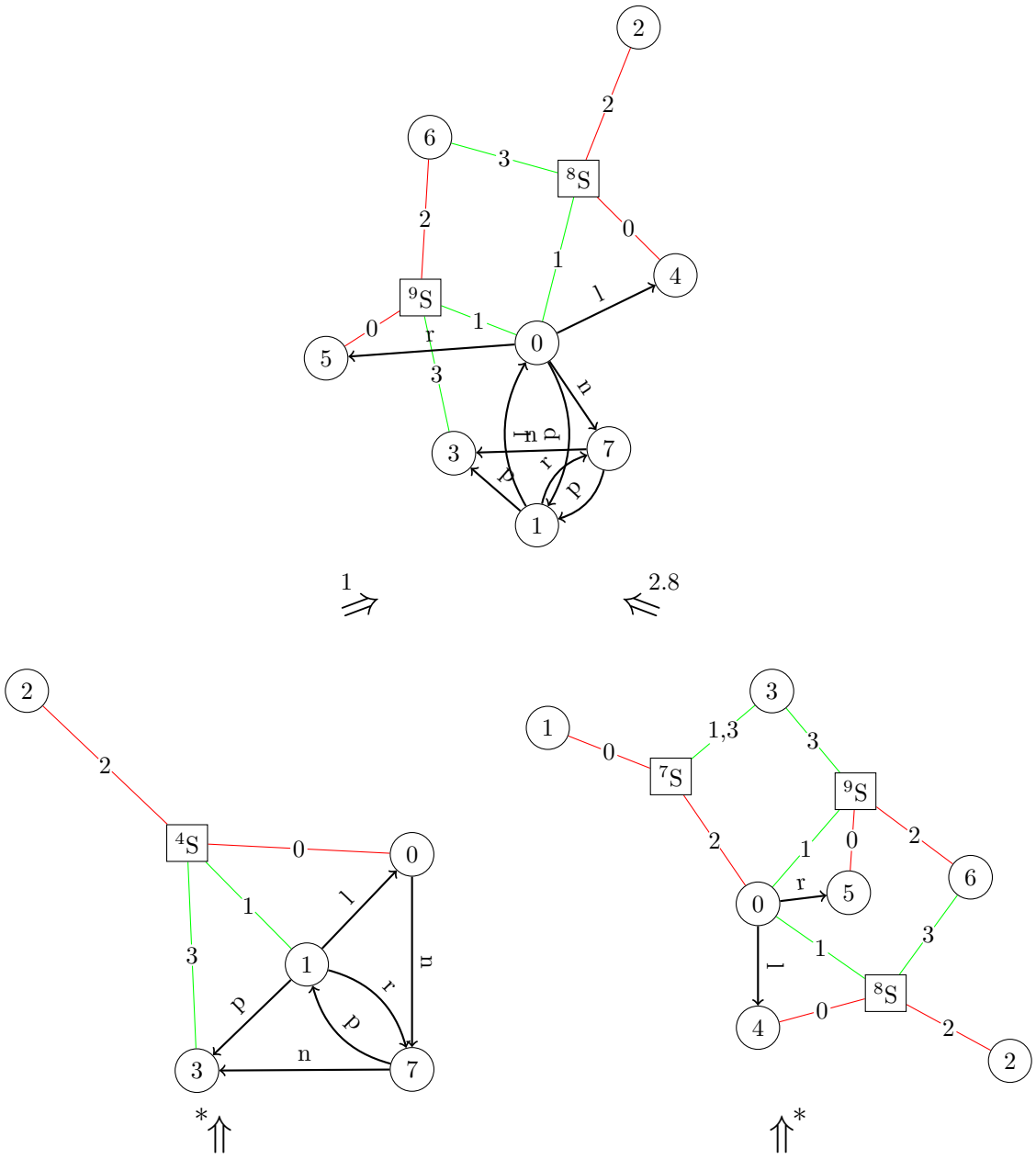
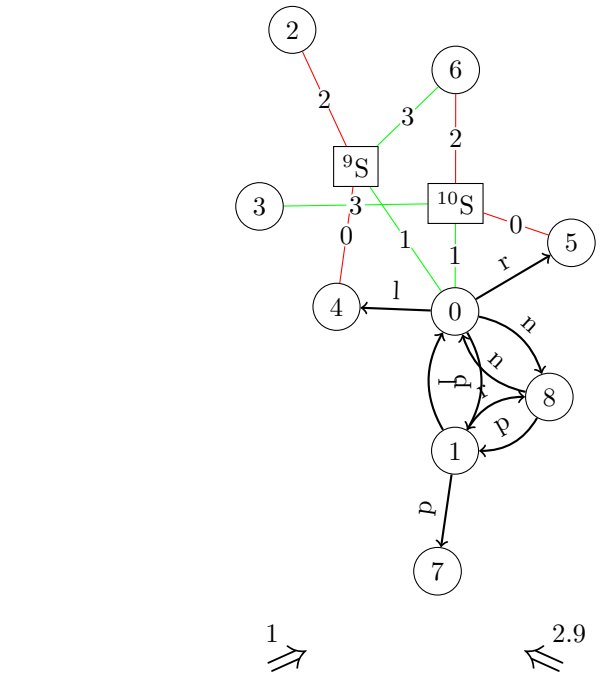


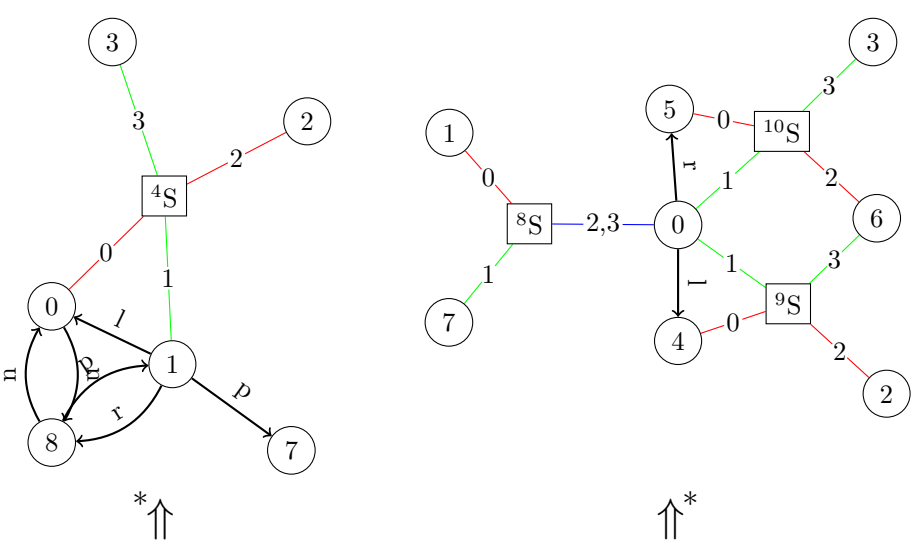
### 1.25 Critical Pair (Not Joinable)



## 1.26 Critical Pair (Not Joinable)




1 ⇉ 2.9 ⇈

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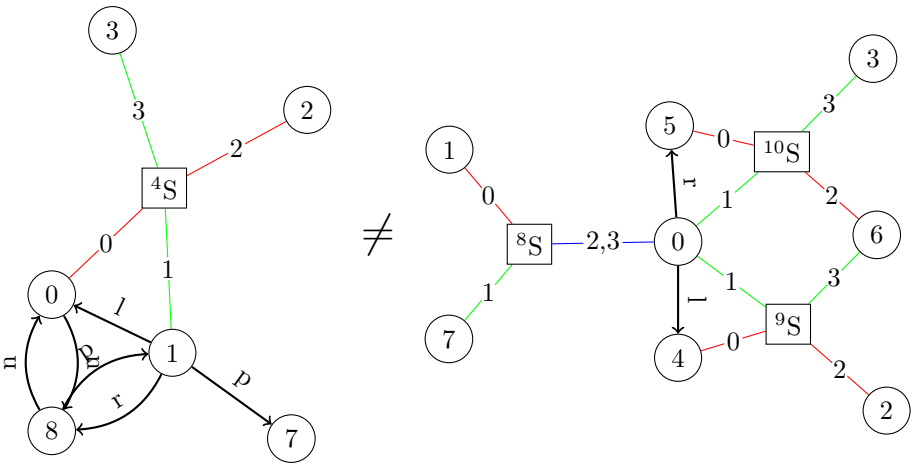
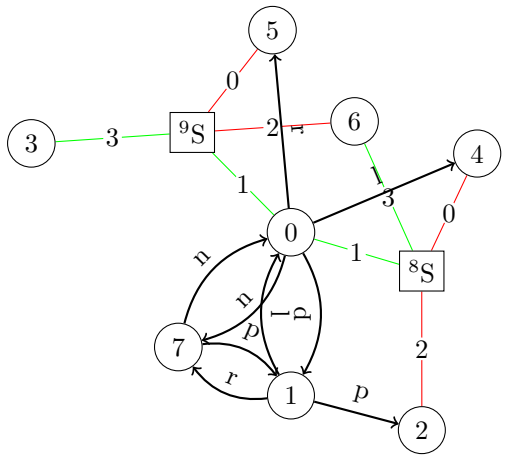
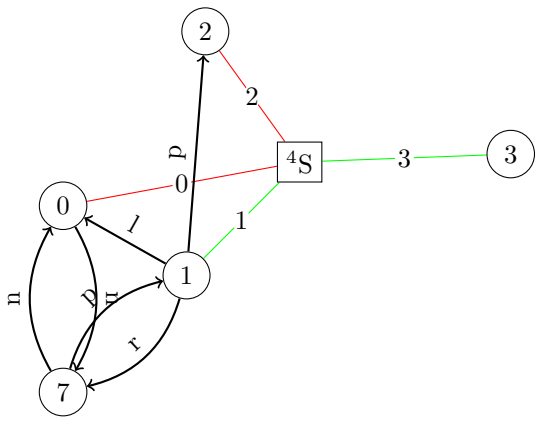
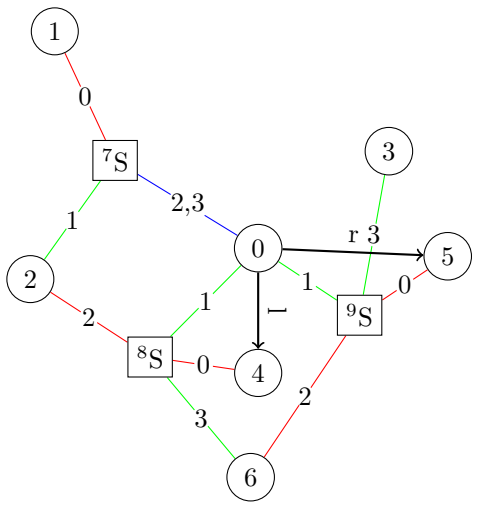


## 1.27 Critical Pair (Not Joinable)




1 2.9

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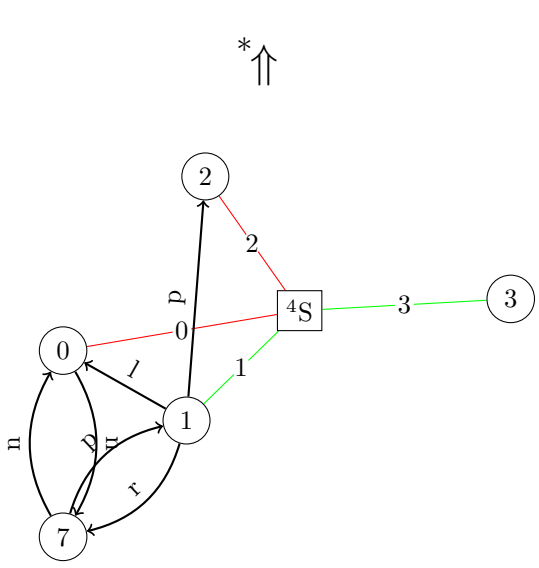


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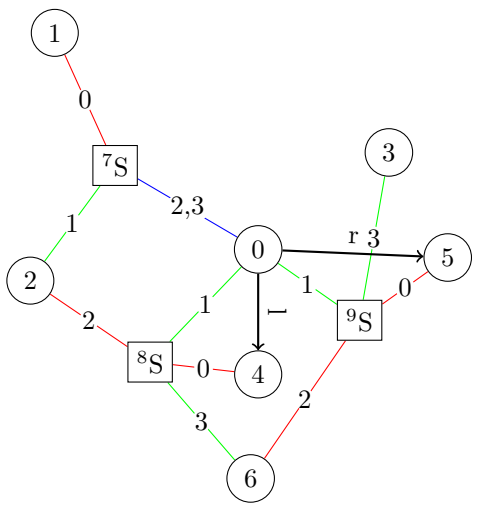
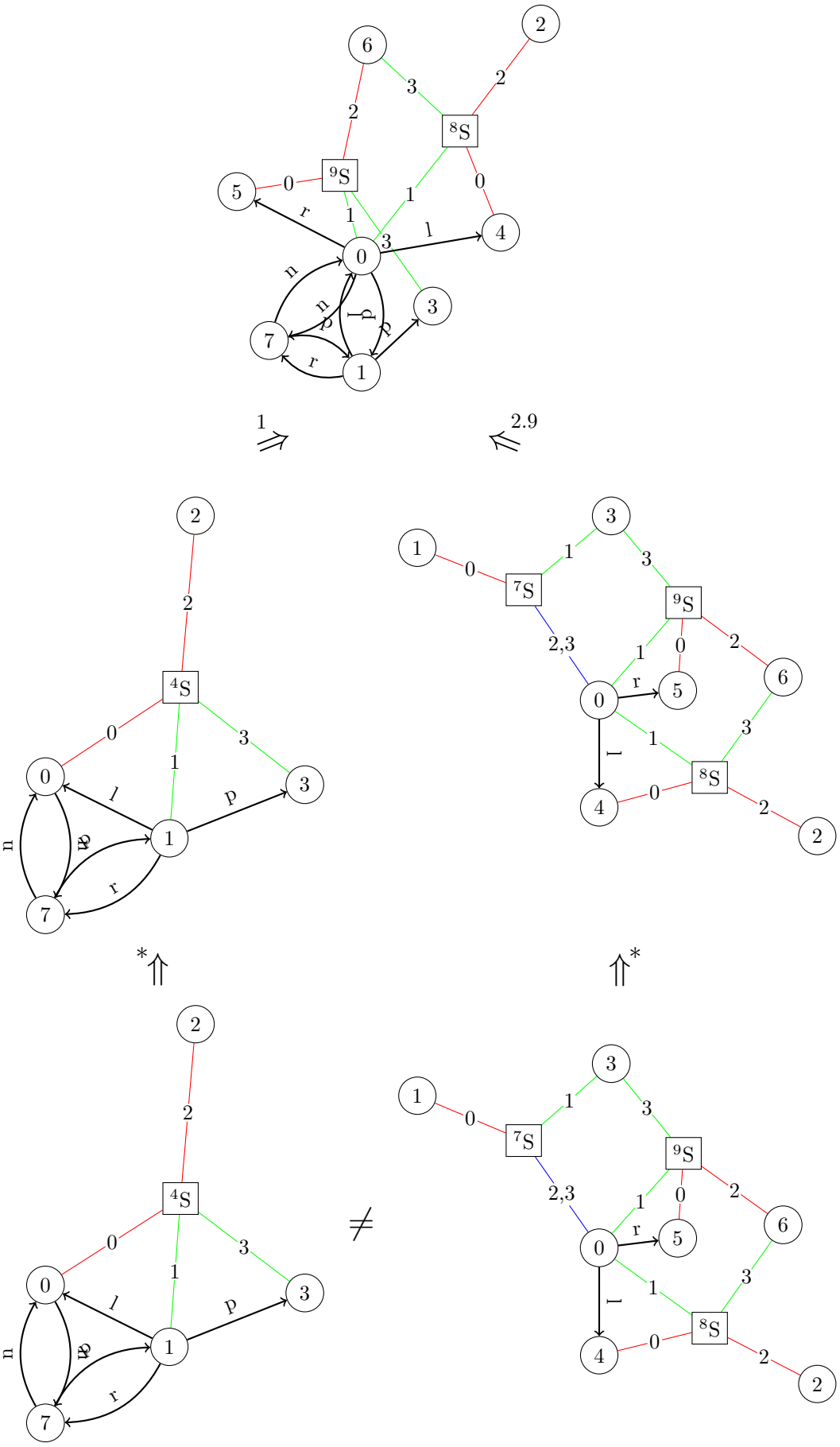
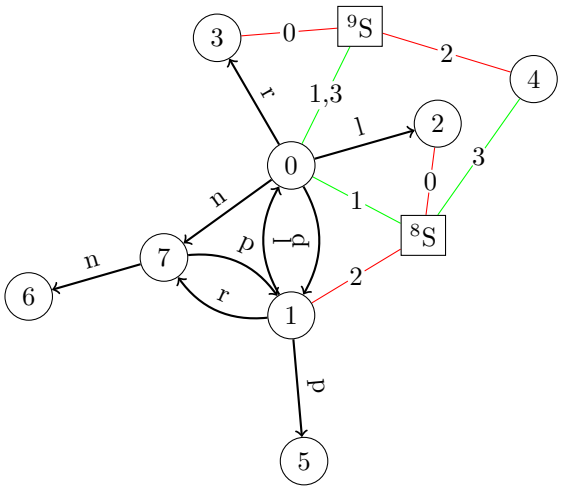


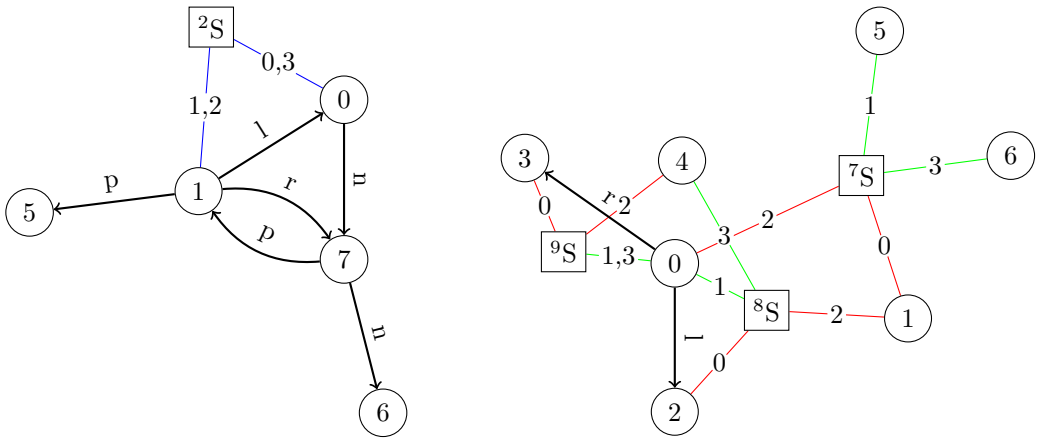
### 1.28 Critical Pair (Not Joinable)



## 1.29 Critical Pair (Not Joinable)




1.4 ⇛ ⇚ 2







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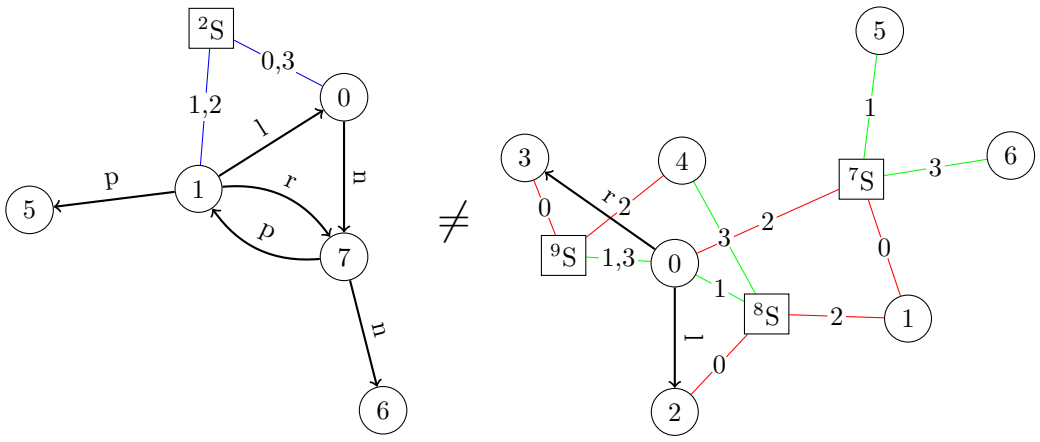


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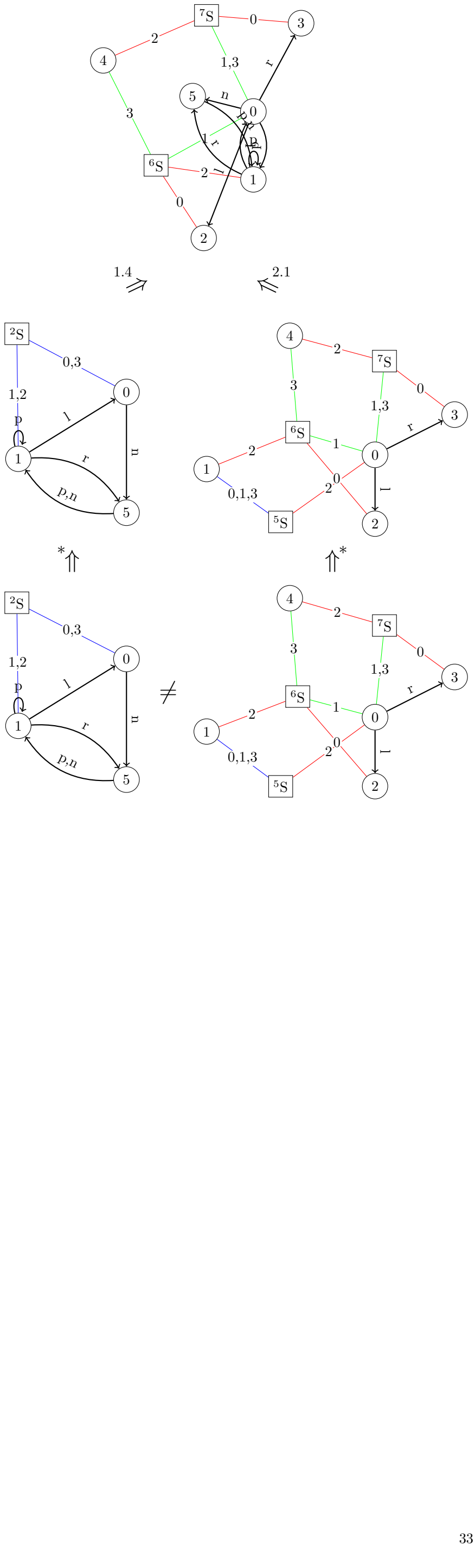
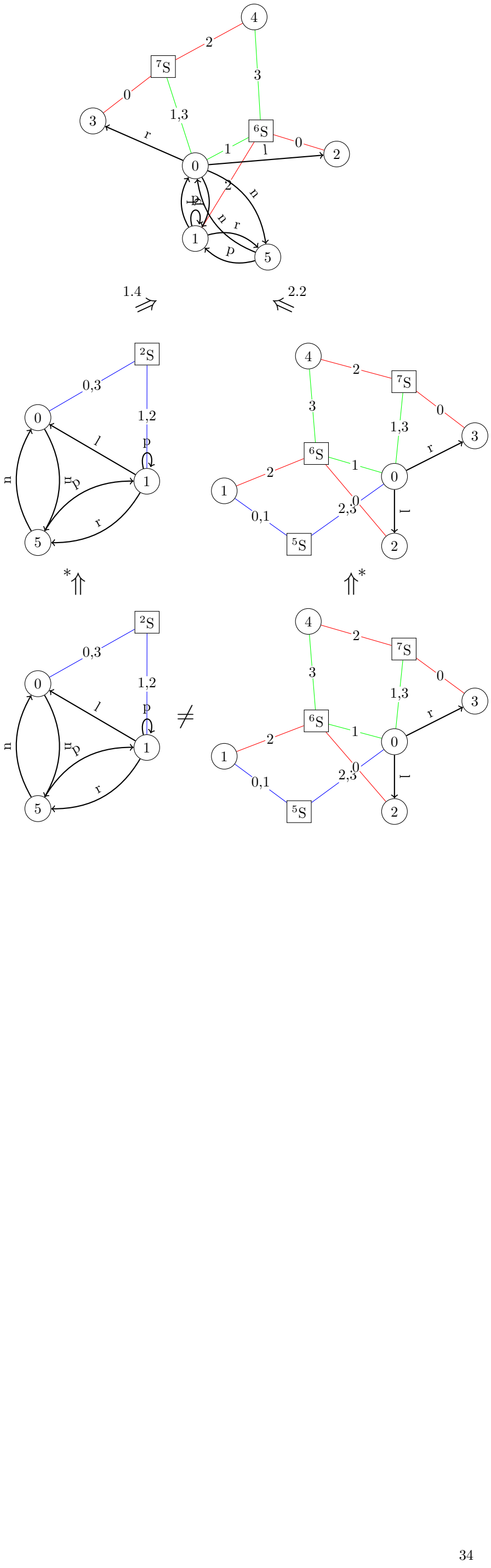
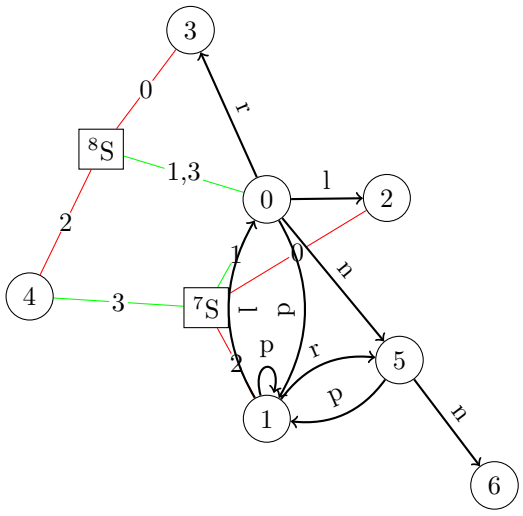
## 1.30 Critical Pair (Not Joinable)



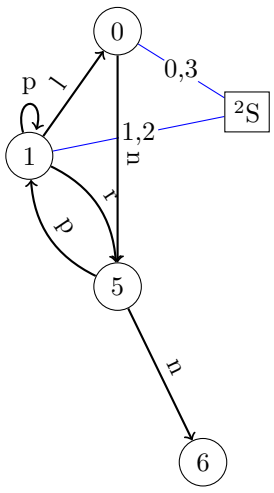
### 1.31 Critical Pair (Not Joinable)

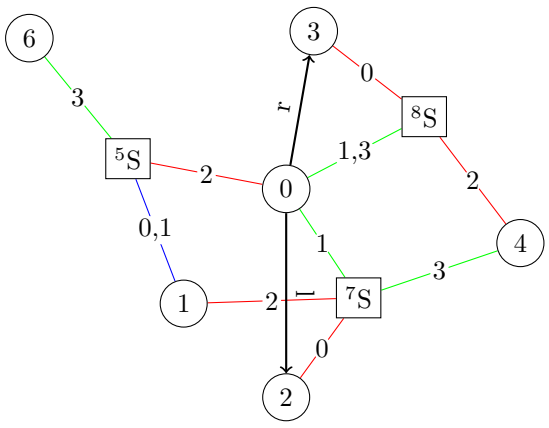


## 1.32 Critical Pair (Not Joinable)




1.4 2.3

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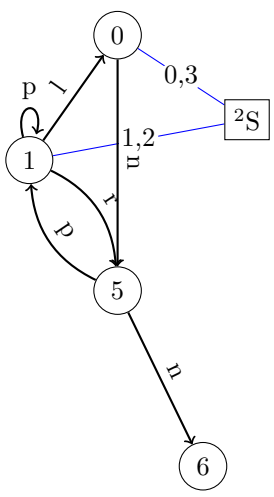


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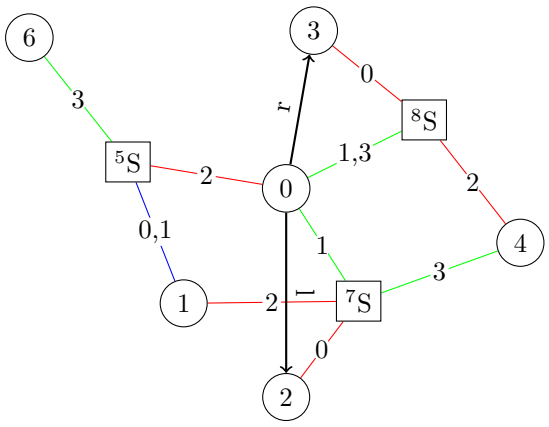
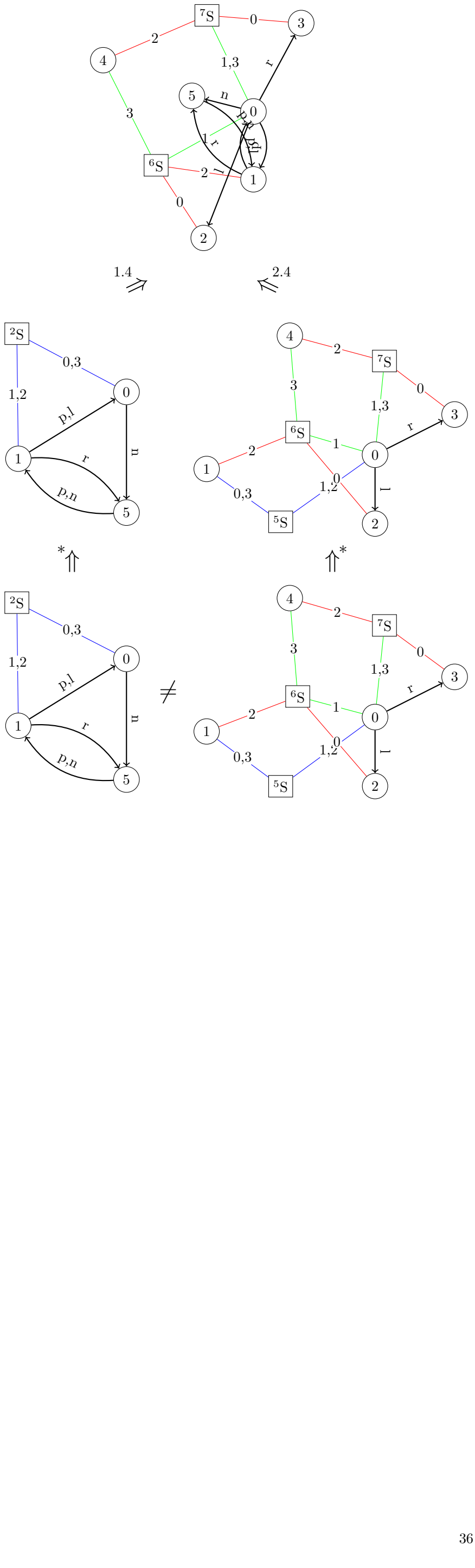
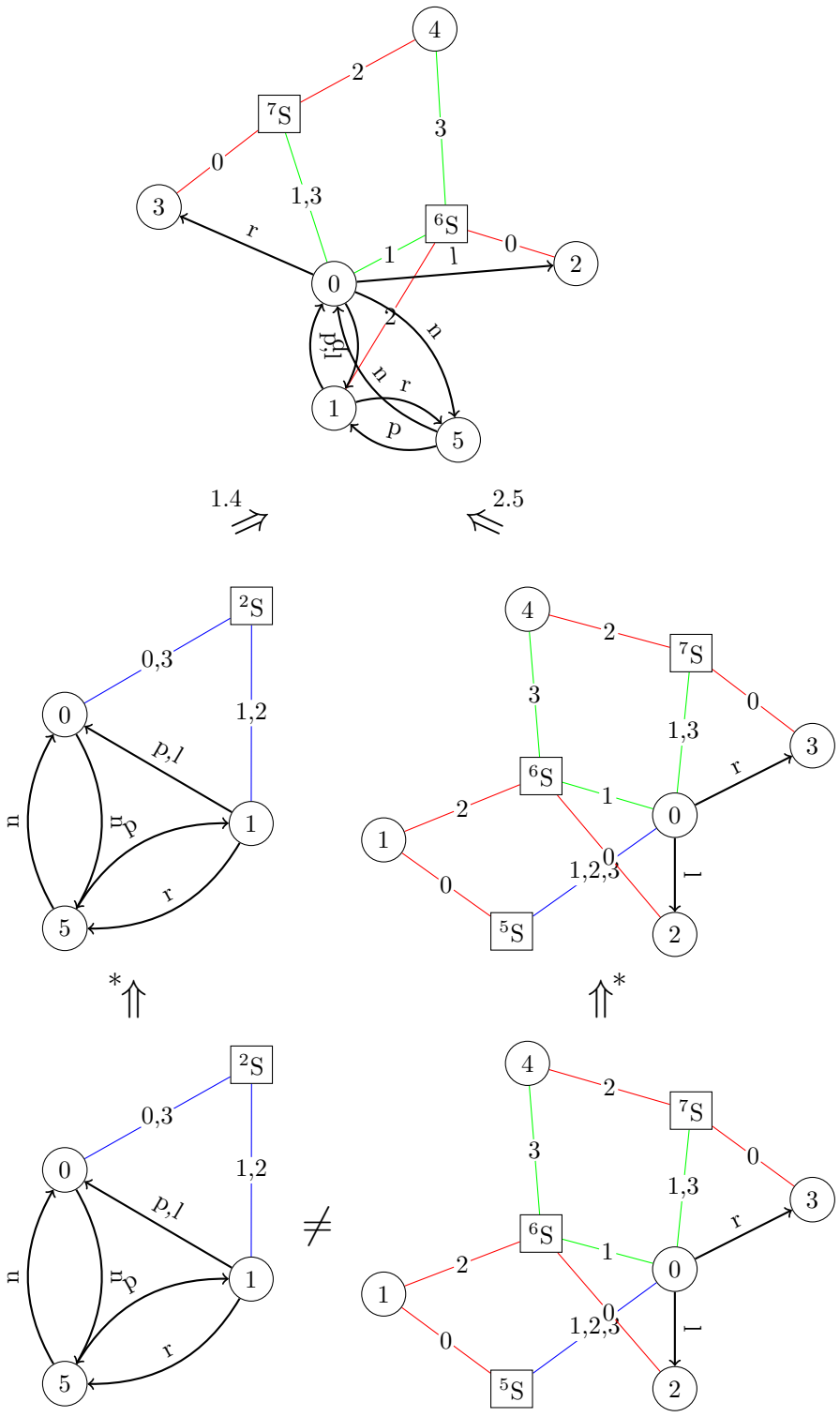


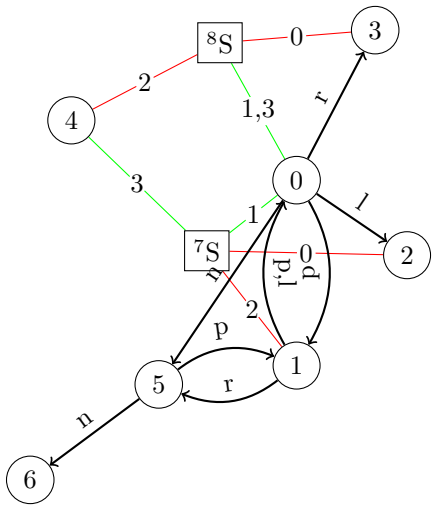
### 1.33 Critical Pair (Not Joinable)



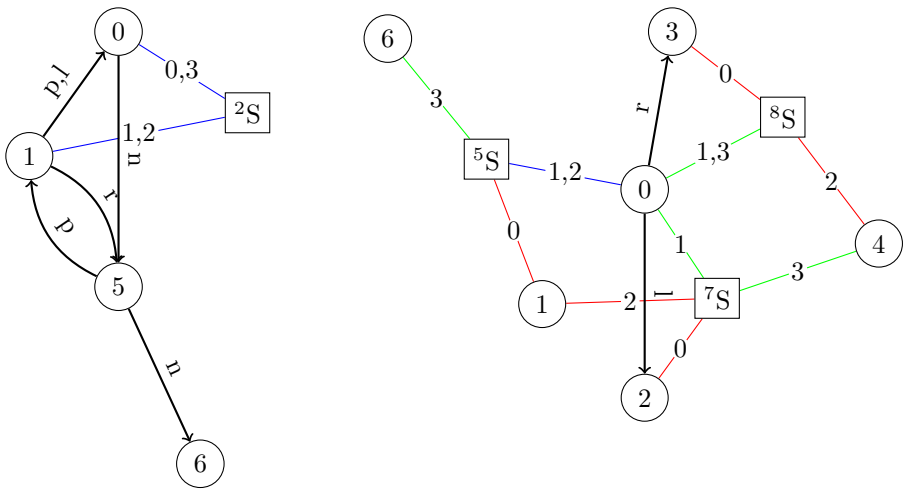
### 1.34 Critical Pair (Not Joinable)



### 1.35 Critical Pair (Not Joinable)




1.4 ⇛ 2.6 ⇚

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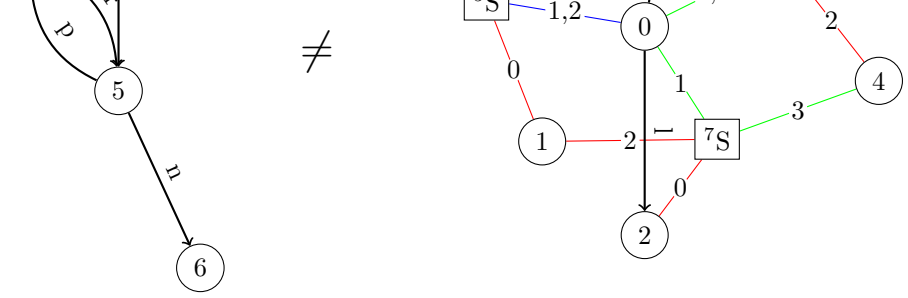

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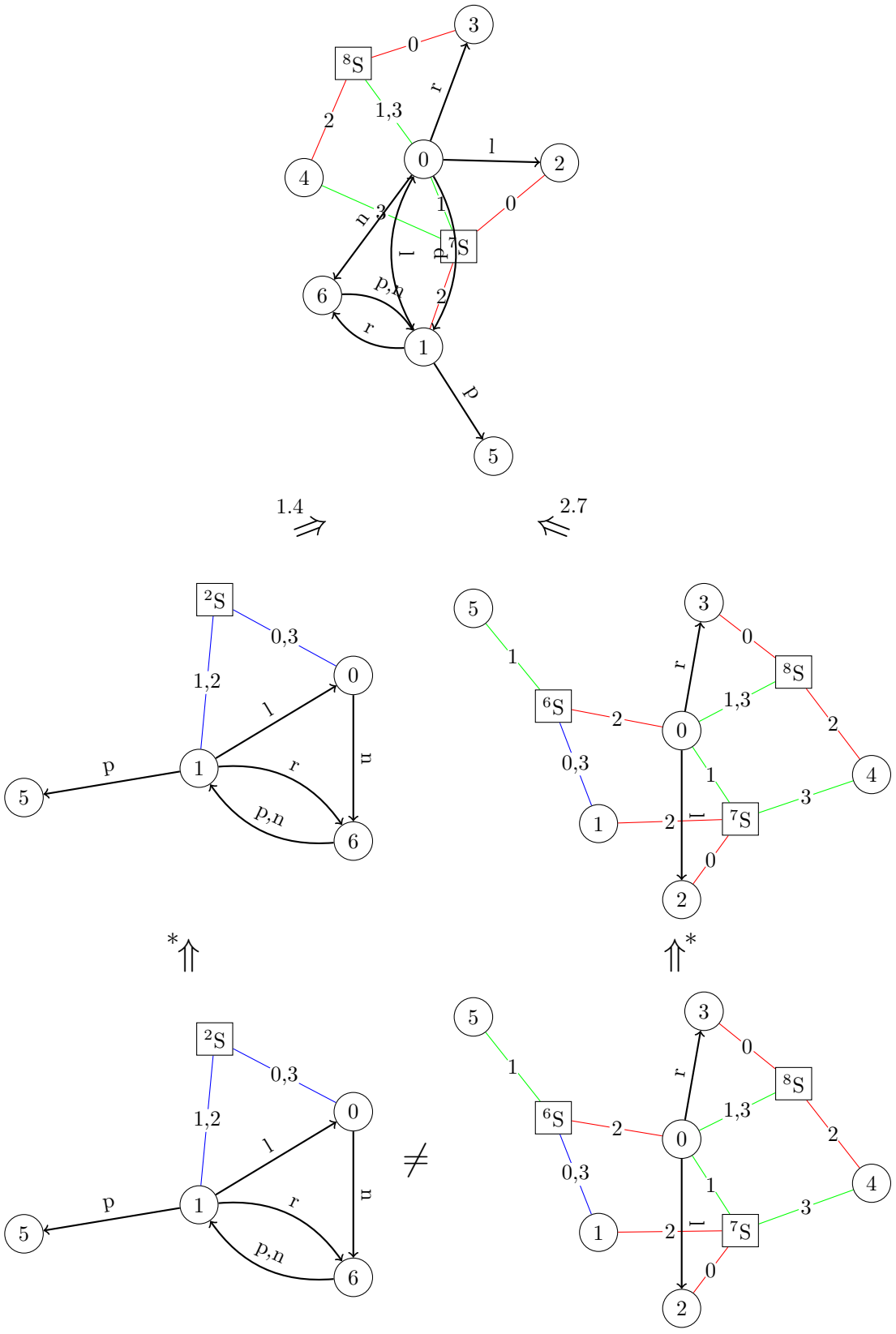
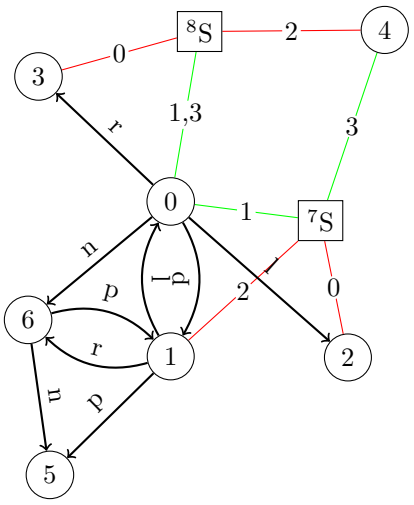
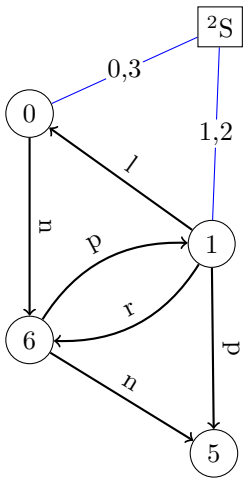


## 1.37 Critical Pair (Not Joinable)




1.4 ⇛ 2.8

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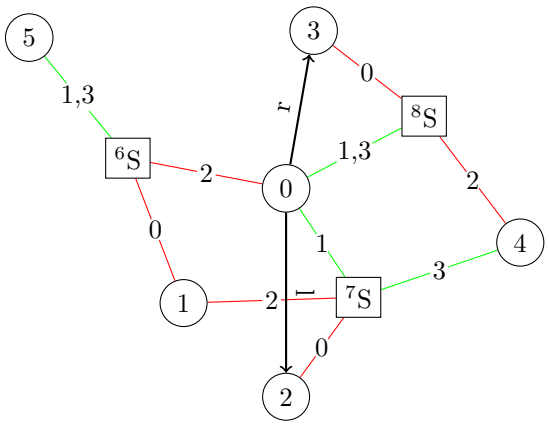


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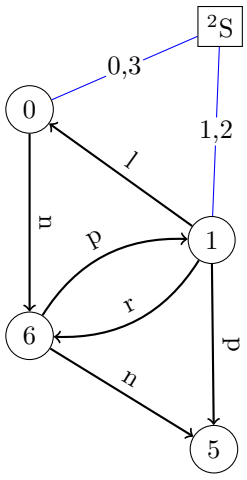


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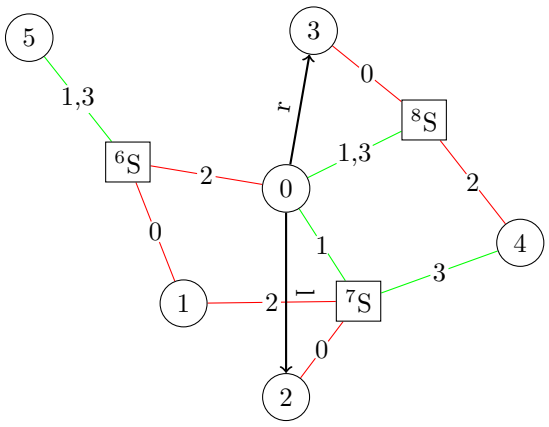
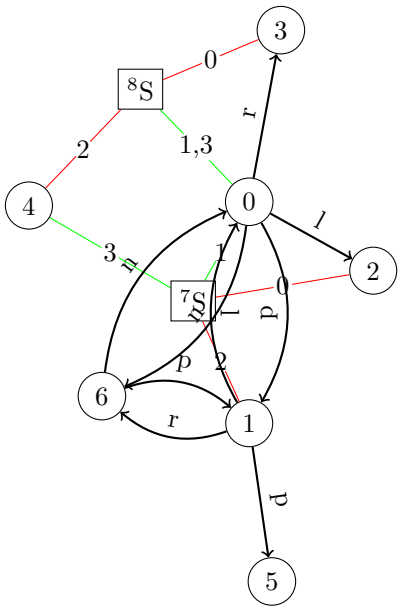
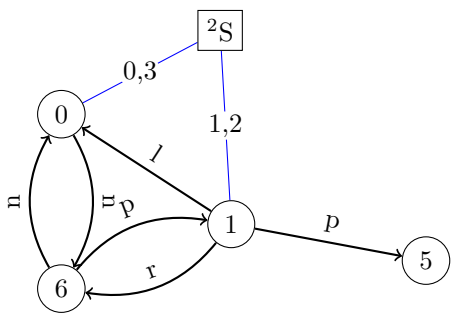
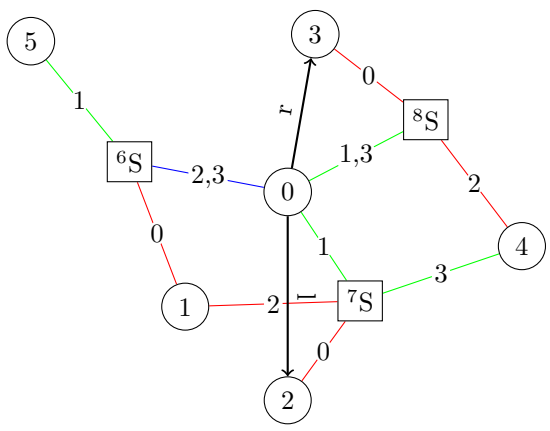


## 1.38 Critical Pair (Not Joinable)




1.4 ⇉ 2.9 ⇇

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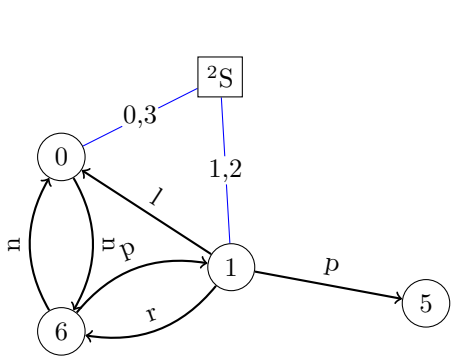


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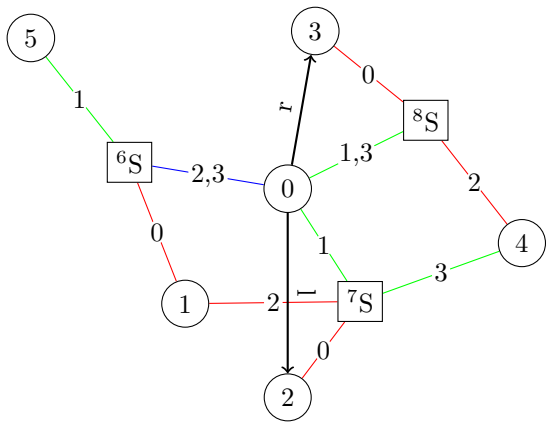
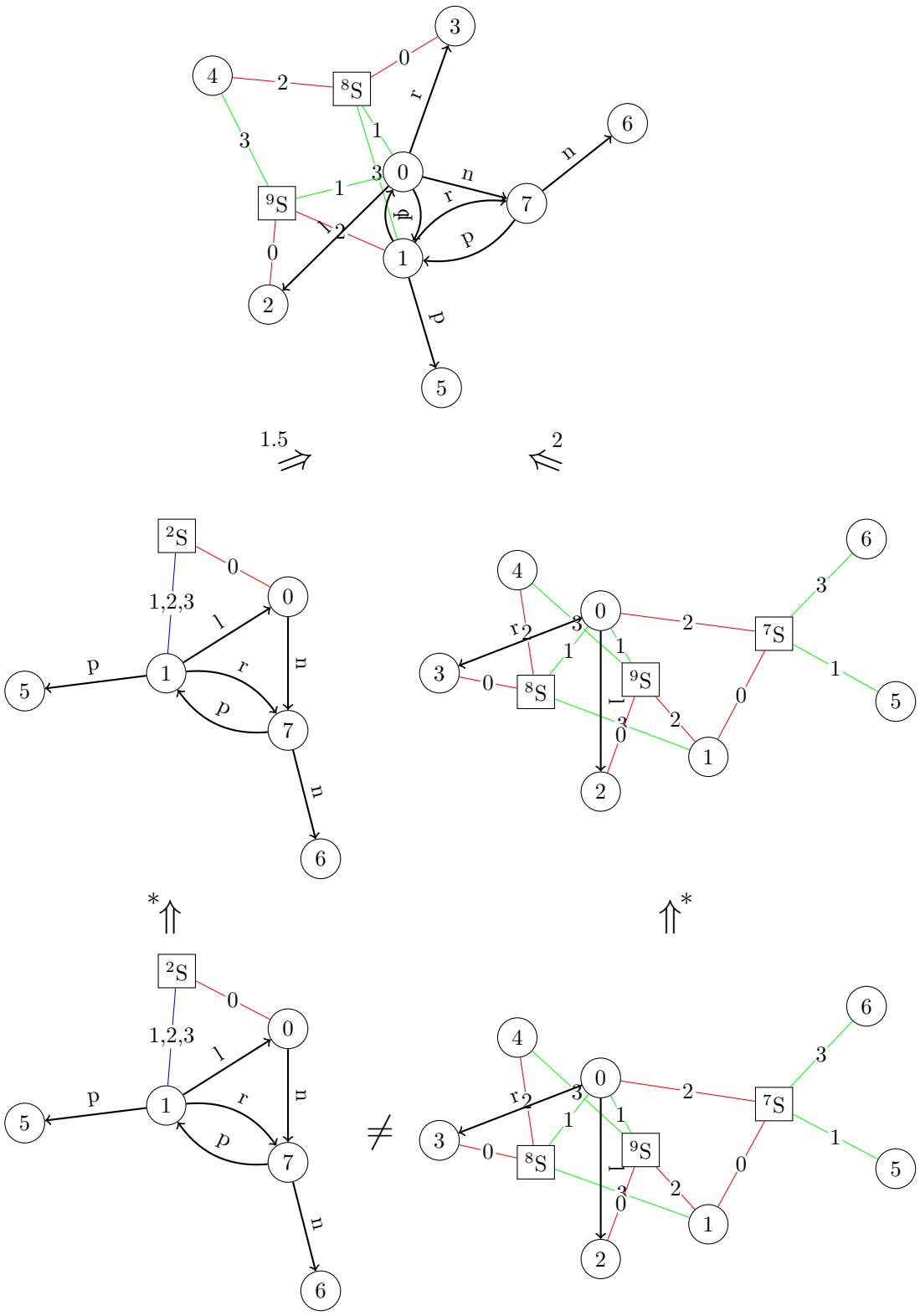
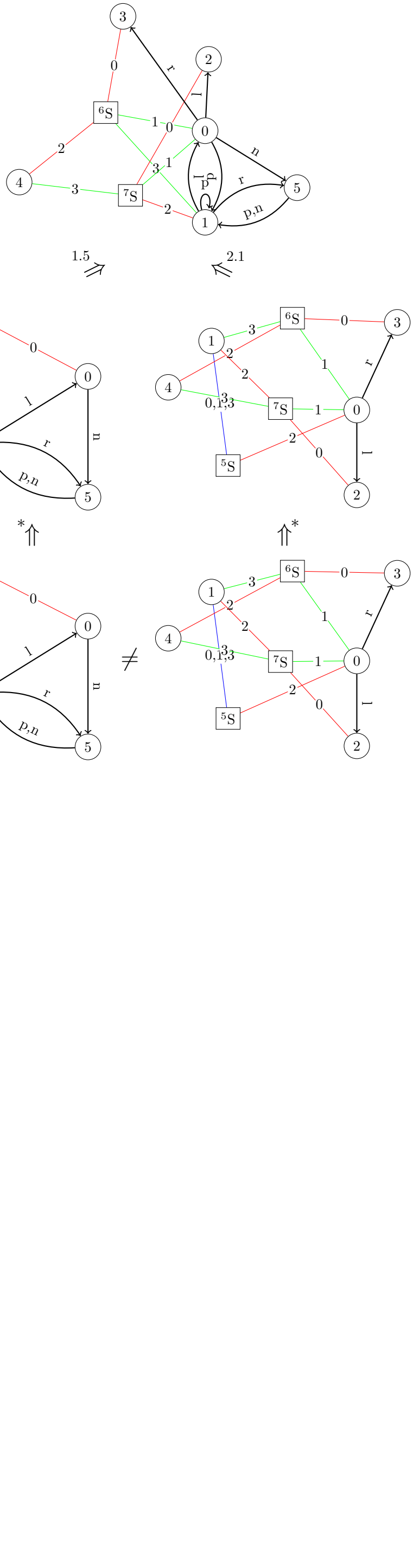


### 1.39 Critical Pair (Not Joinable)



## 1.40 Critical Pair (Not Joinable)



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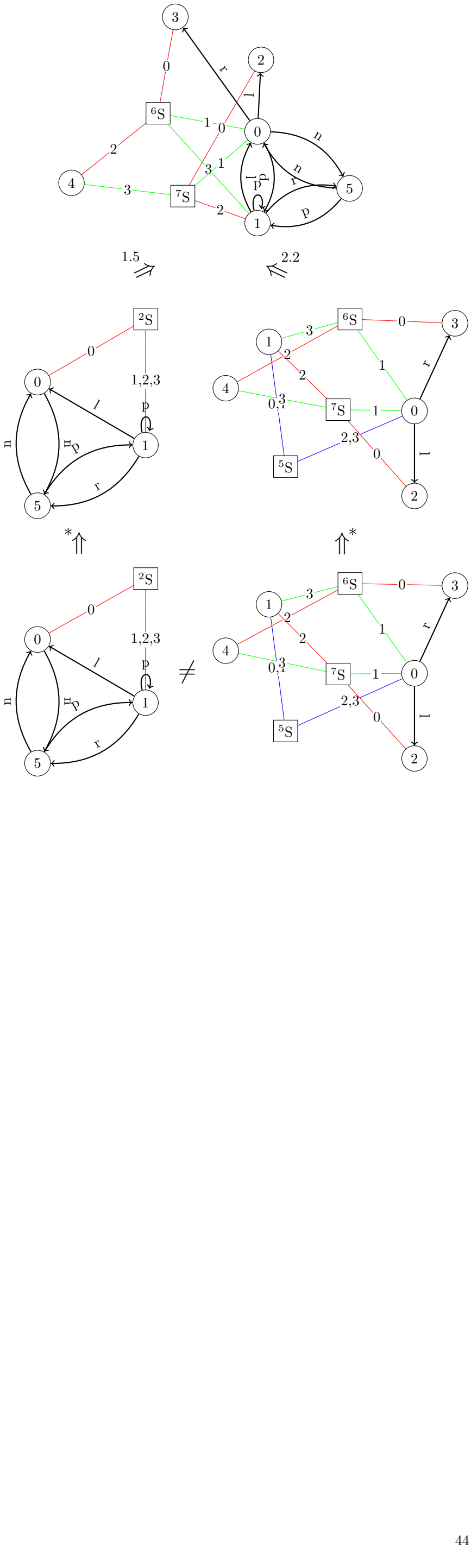
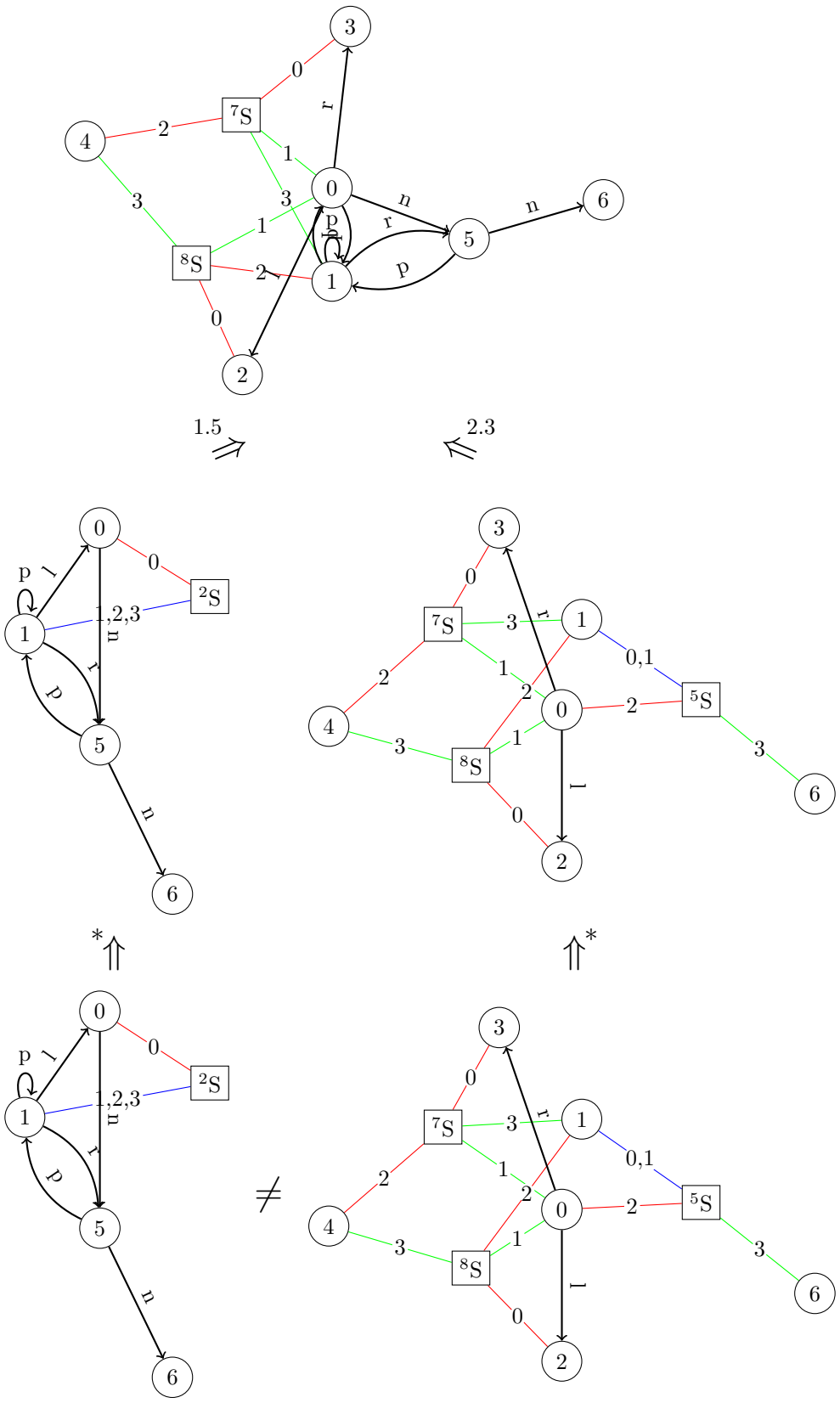


### 1.42 Critical Pair (Not Joinable)



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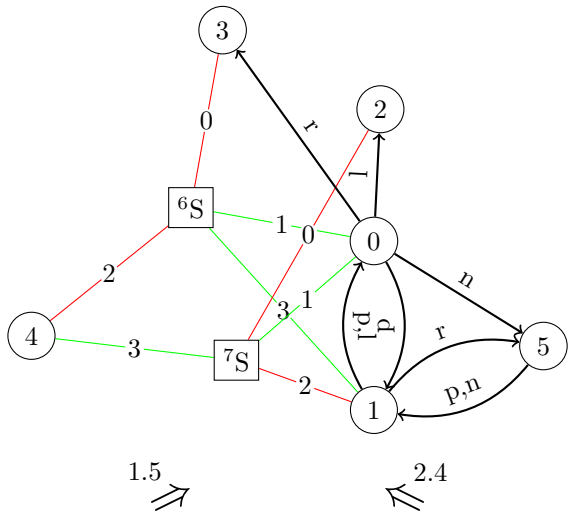
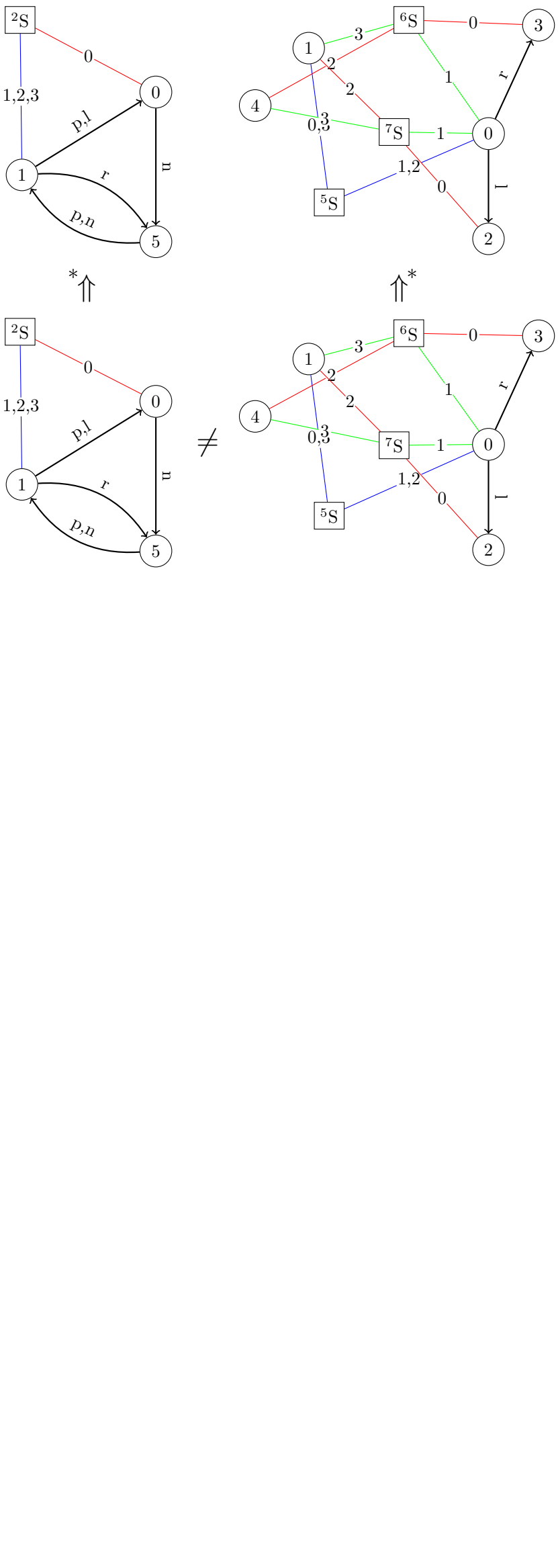
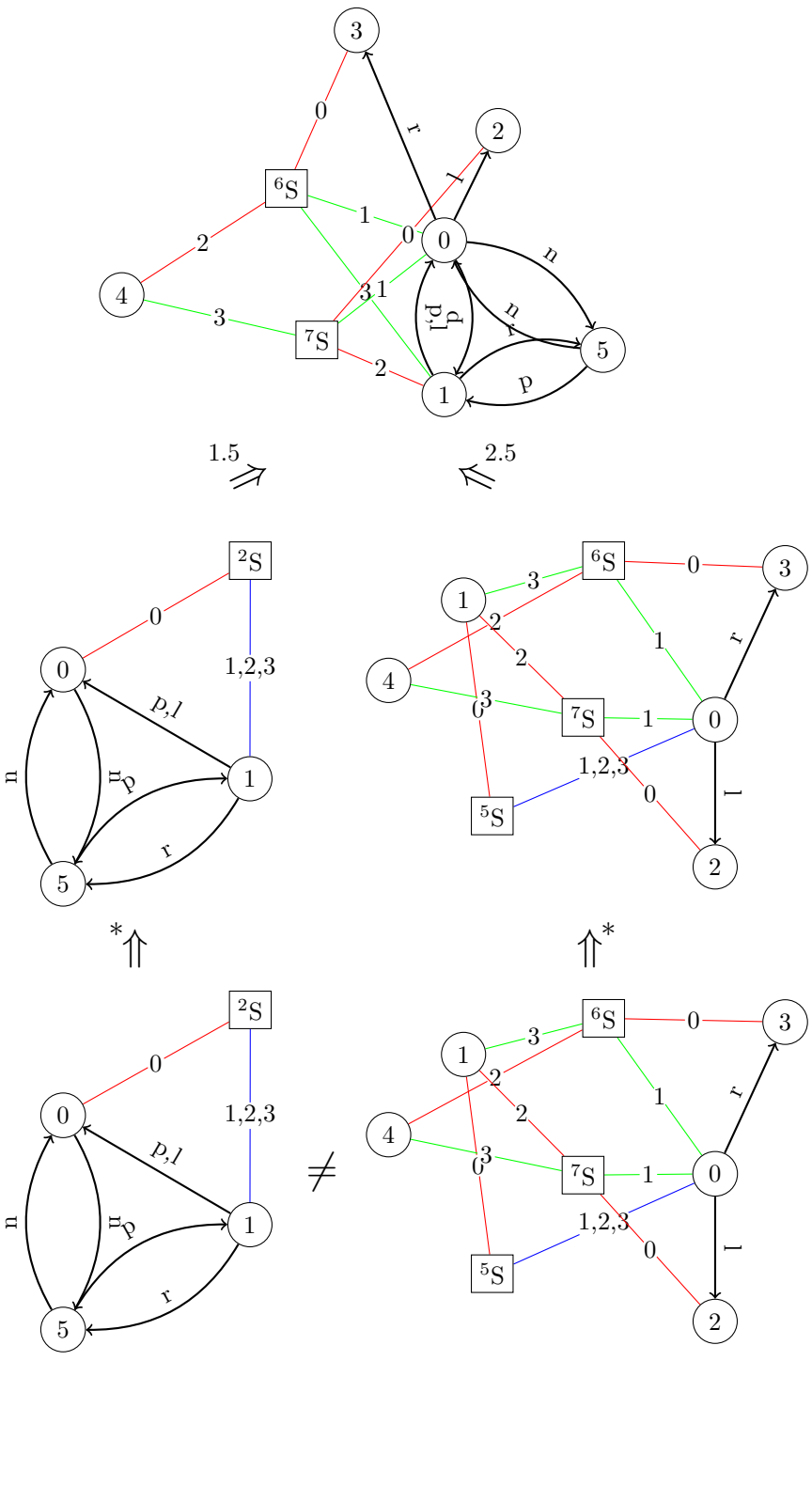


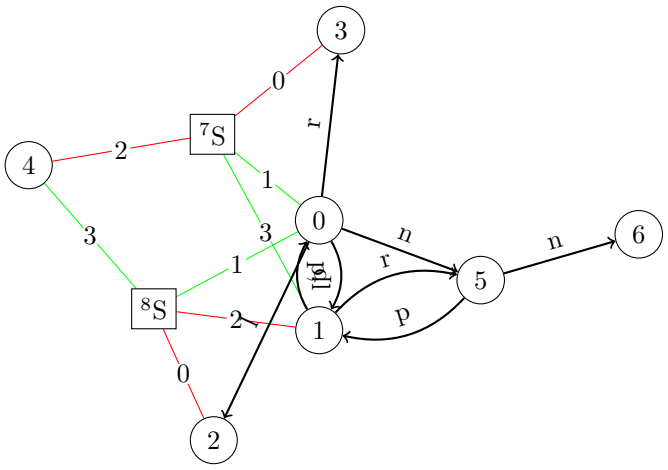

1.5 2.4



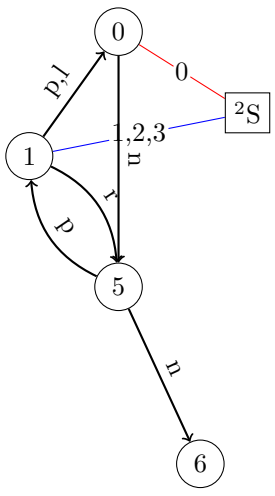
## 1.44 Critical Pair (Not Joinable)

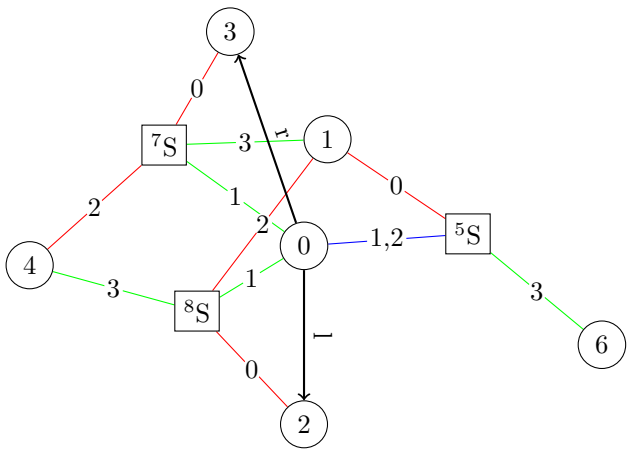


### 1.45 Critical Pair (Not Joinable)




1.5 ⇛ 2.6

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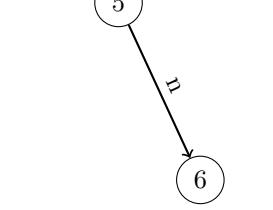


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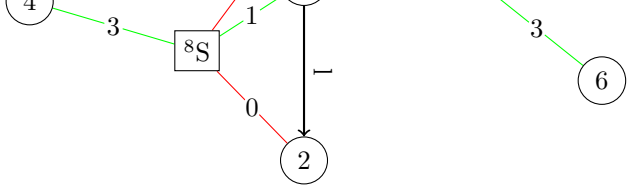
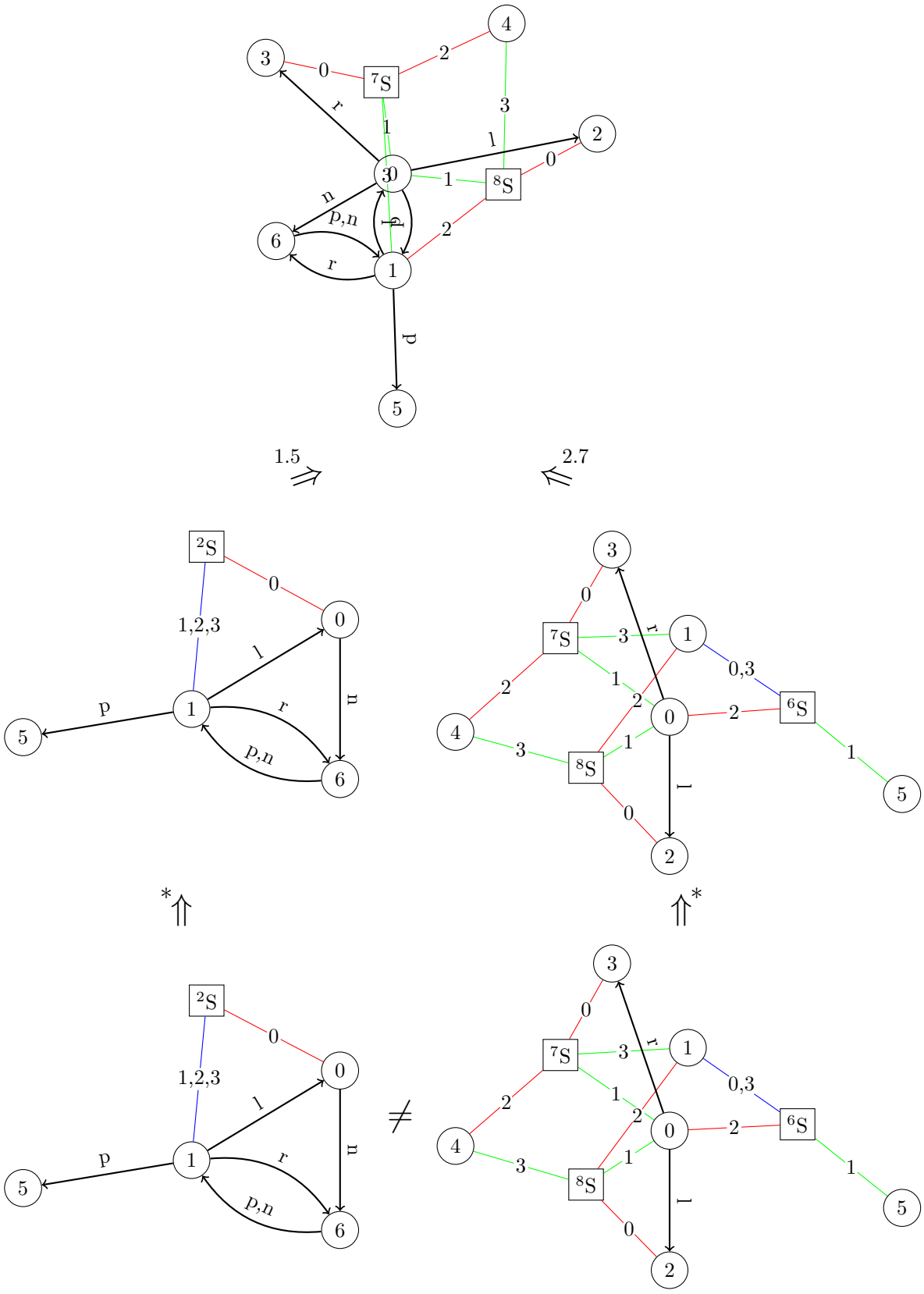
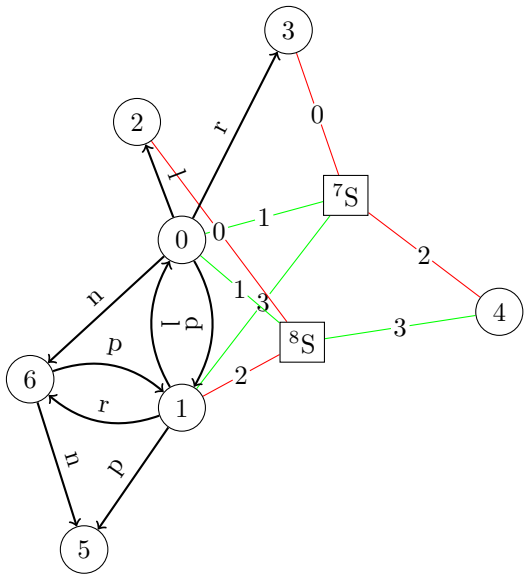


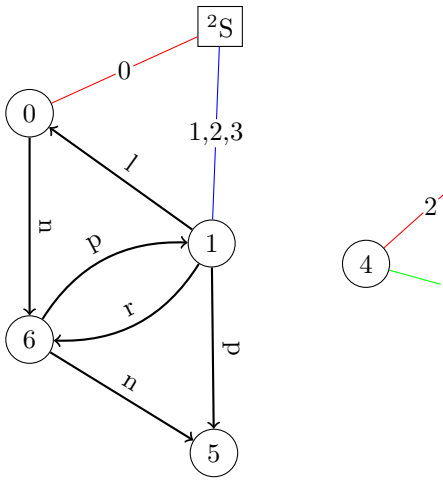
### 1.46 Critical Pair (Not Joinable)



## 1.47 Critical Pair (Not Joinable)




1.5 ⇛ 2.8 ⇚

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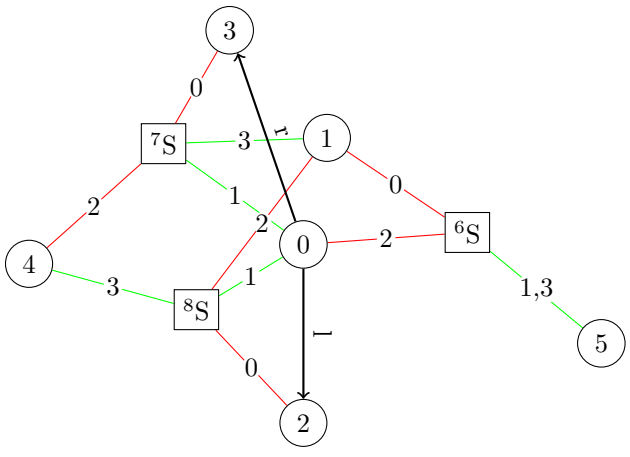


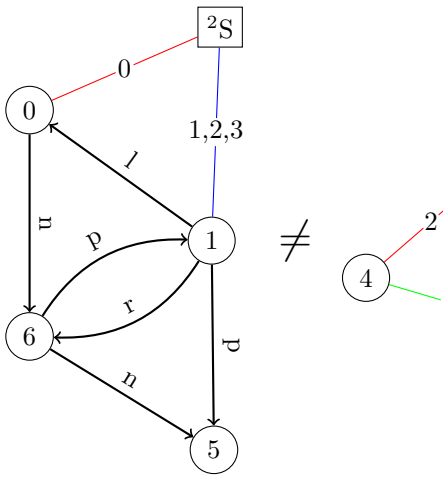


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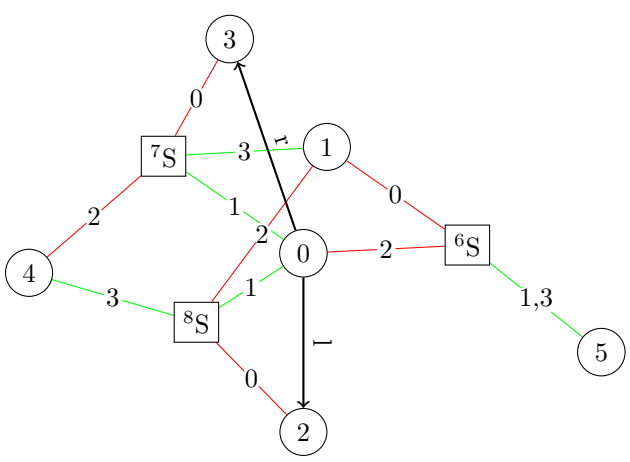
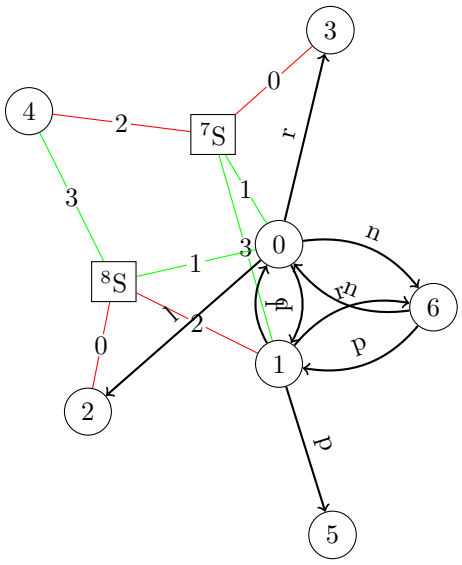
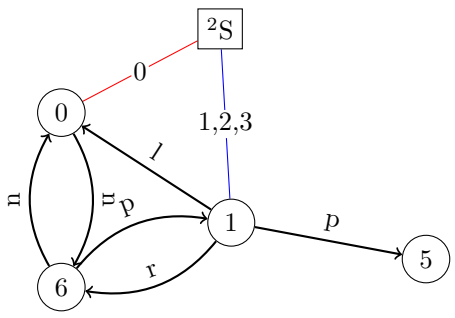
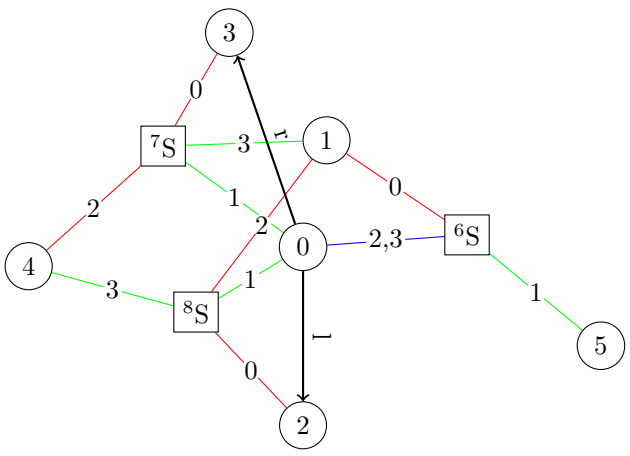


## 1.48 Critical Pair (Not Joinable)




1.5 ⇉ ⇇ 2.9

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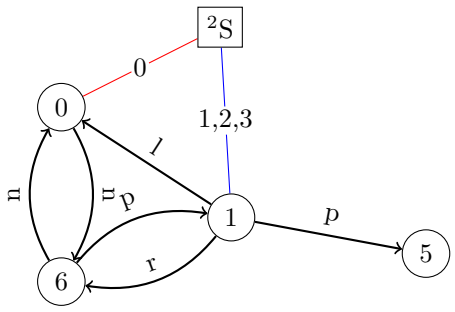


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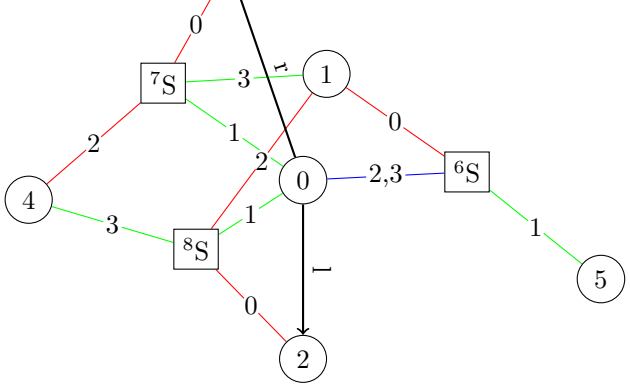
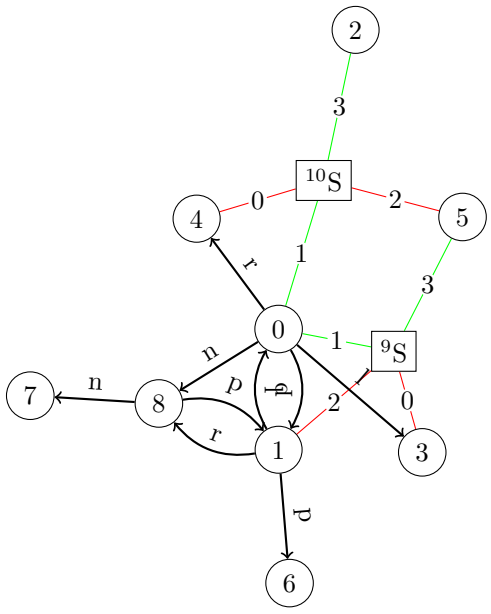
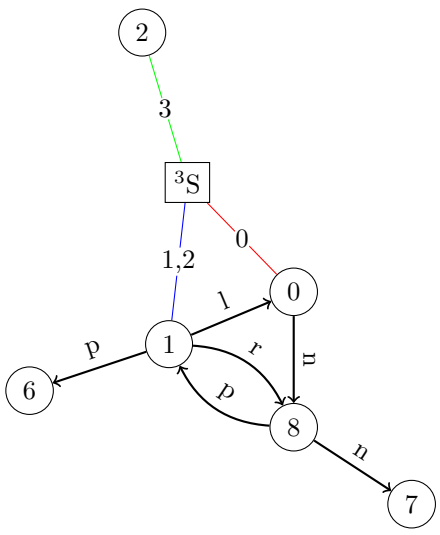


### 1.49 Critical Pair (Not Joinable)




1.6 ⇉ 2 ⇇

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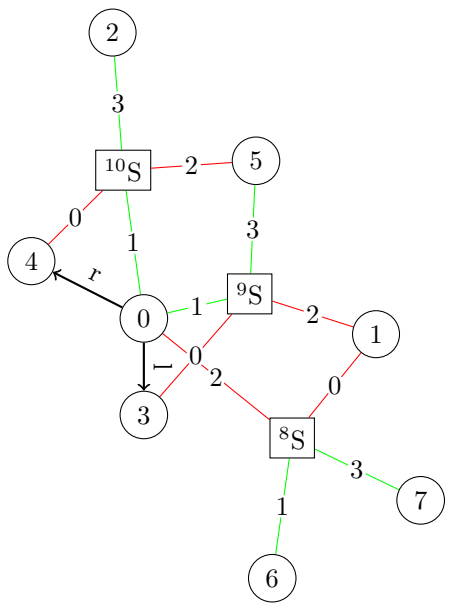


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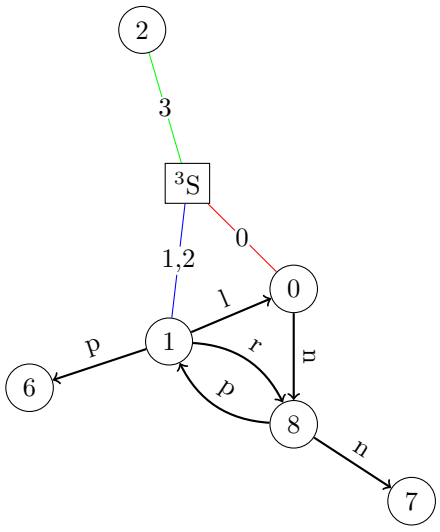
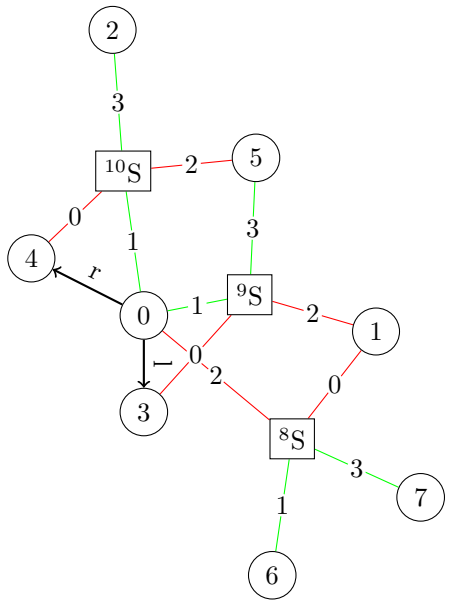
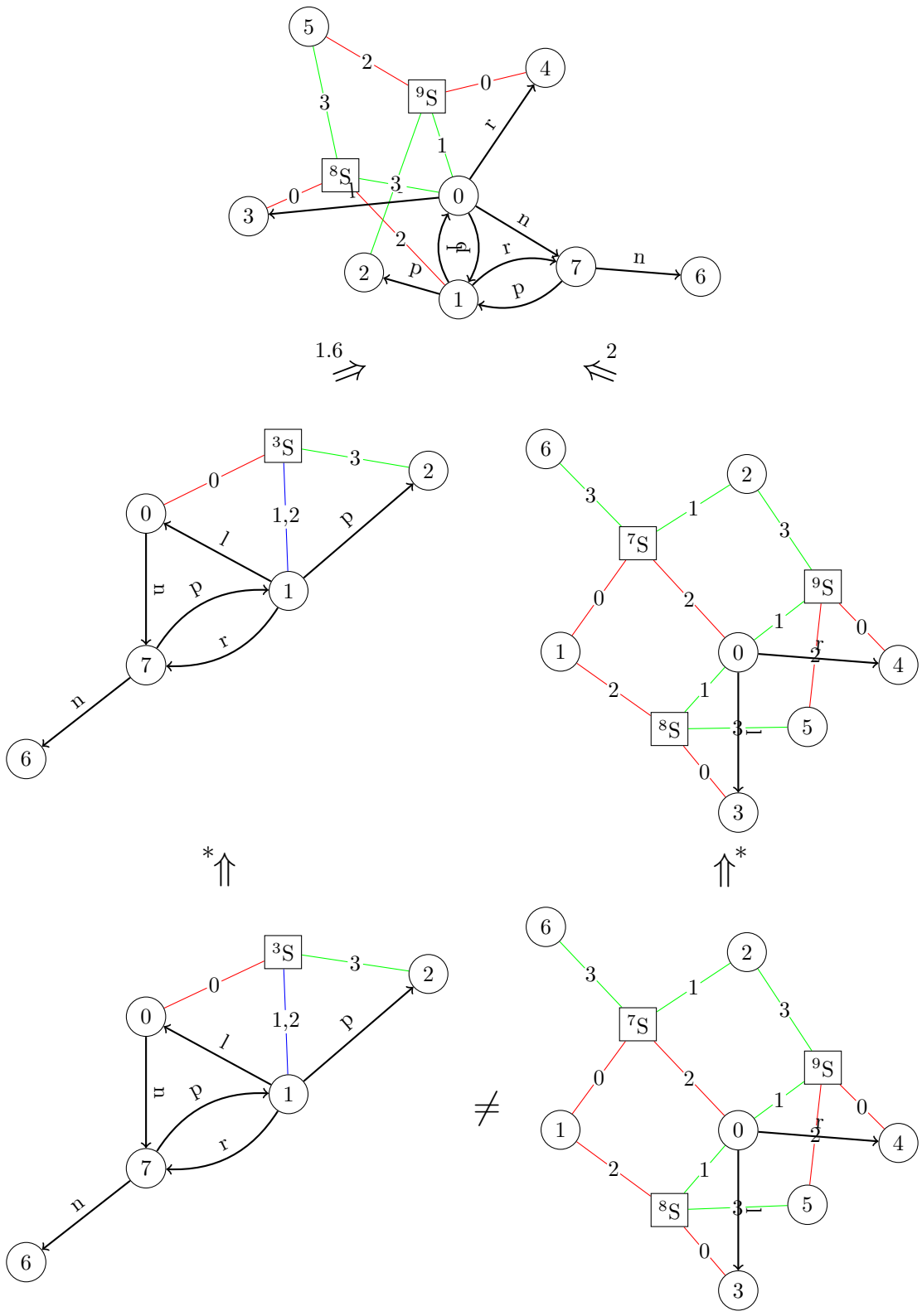
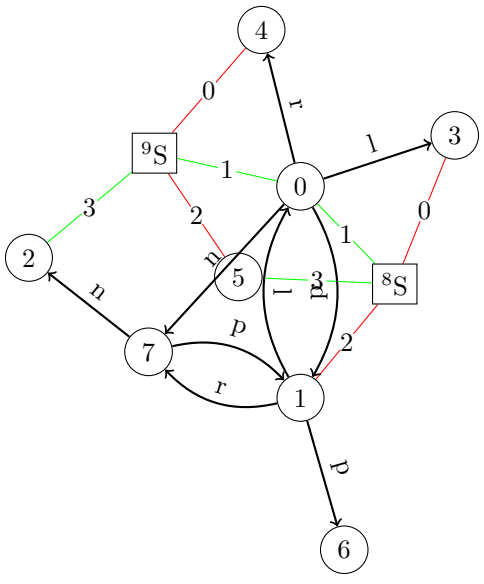


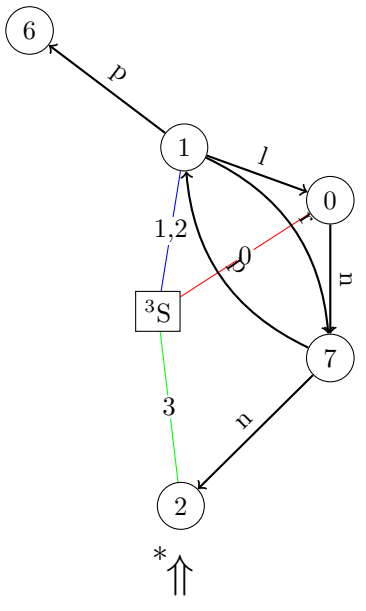
## 1.50 Critical Pair (Not Joinable)



### 1.51 Critical Pair (Not Joinable)




1.6 ⇛ 2 ⇚

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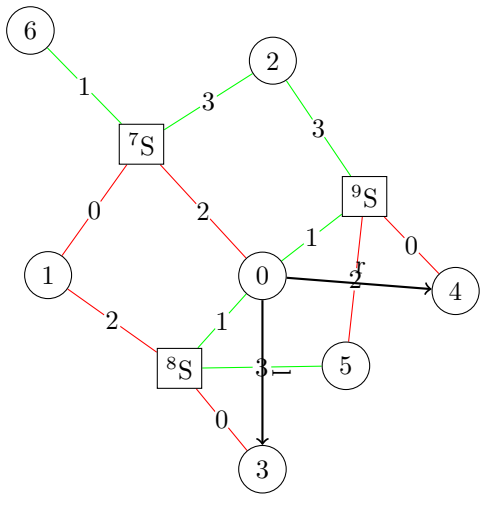


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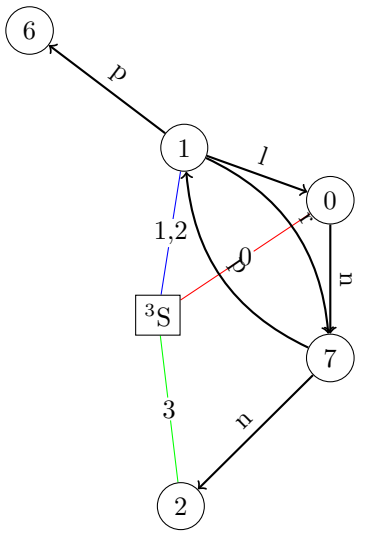


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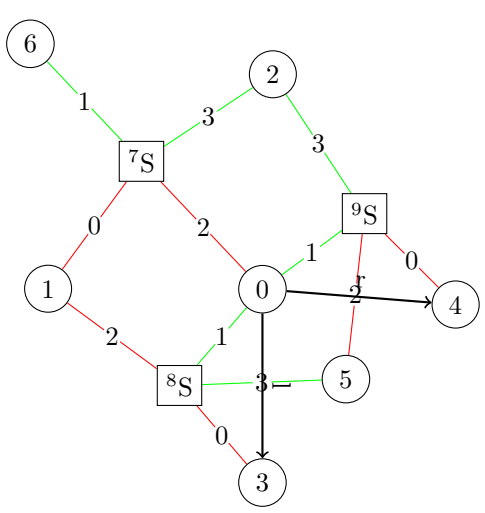
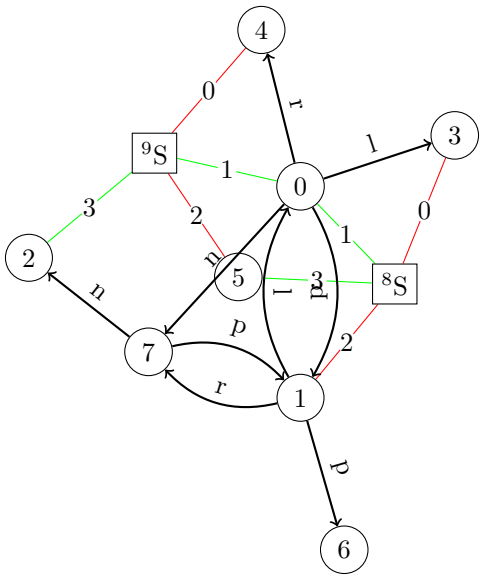
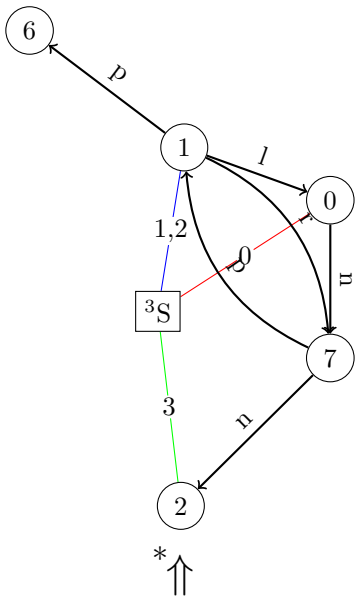


## 1.52 Critical Pair (Not Joinable)




1.6 ⇒ 2 ⇐

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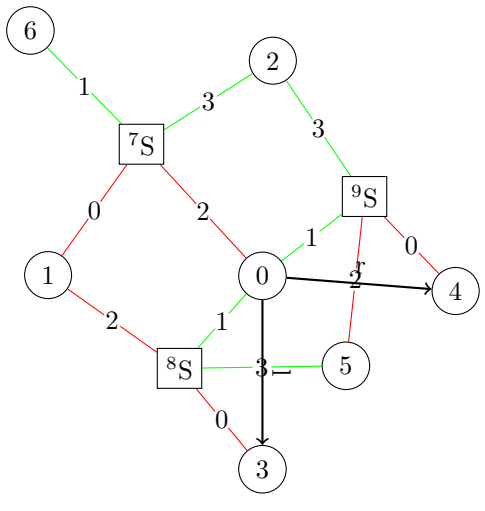


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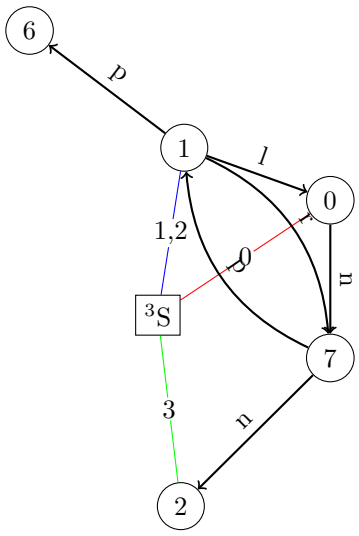


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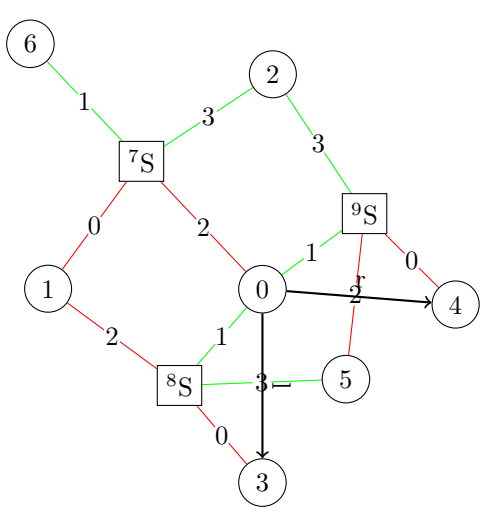
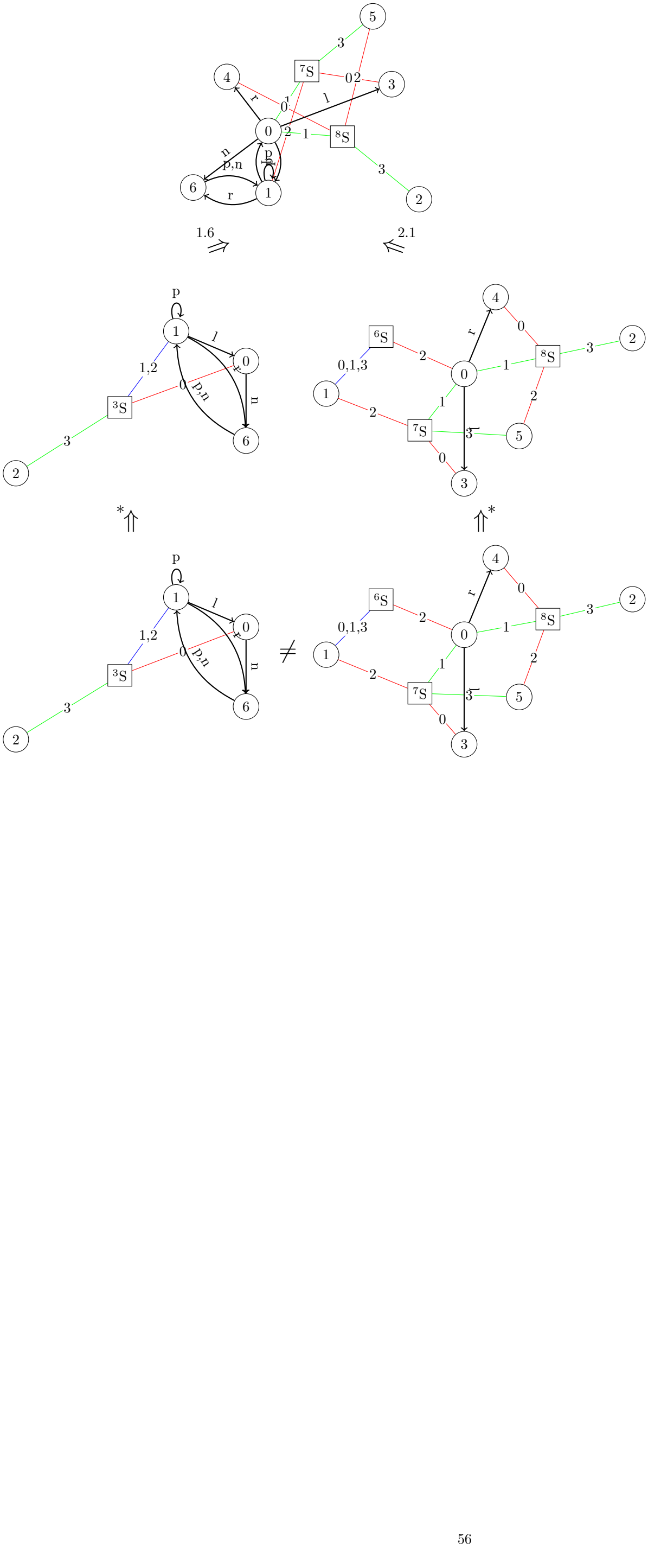
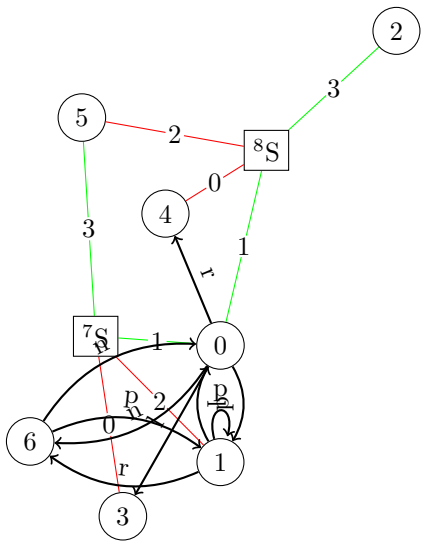


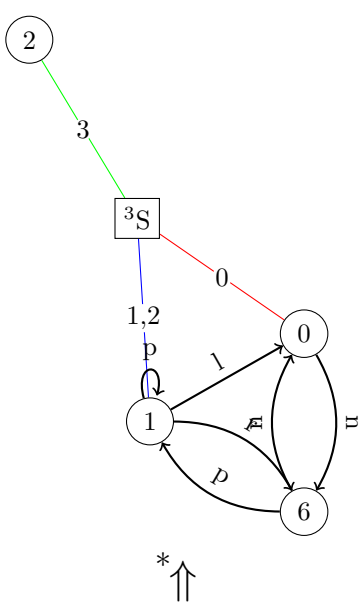
### 1.53 Critical Pair (Not Joinable)



## 1.54 Critical Pair (Not Joinable)




1.6 2.2

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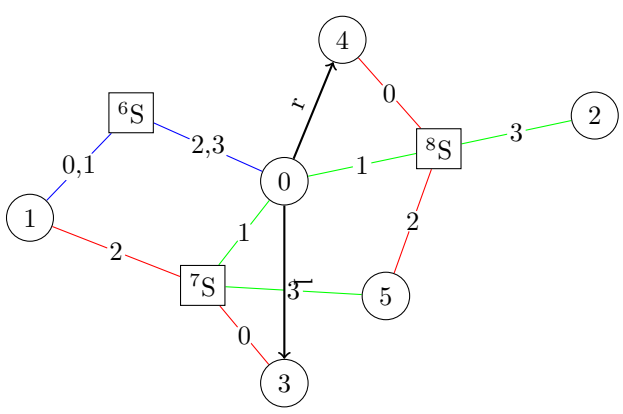


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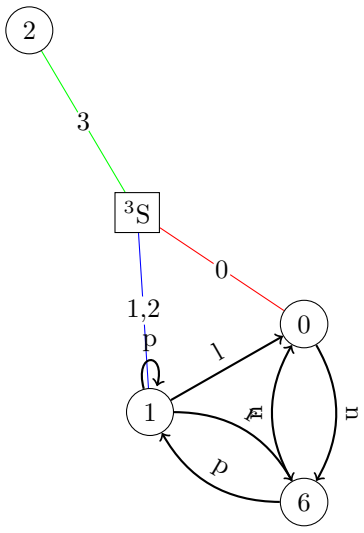


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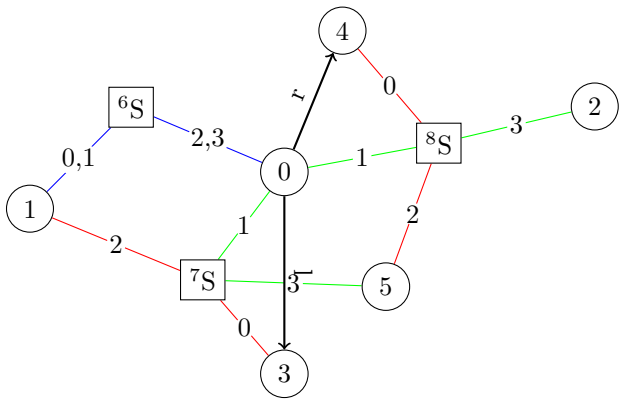
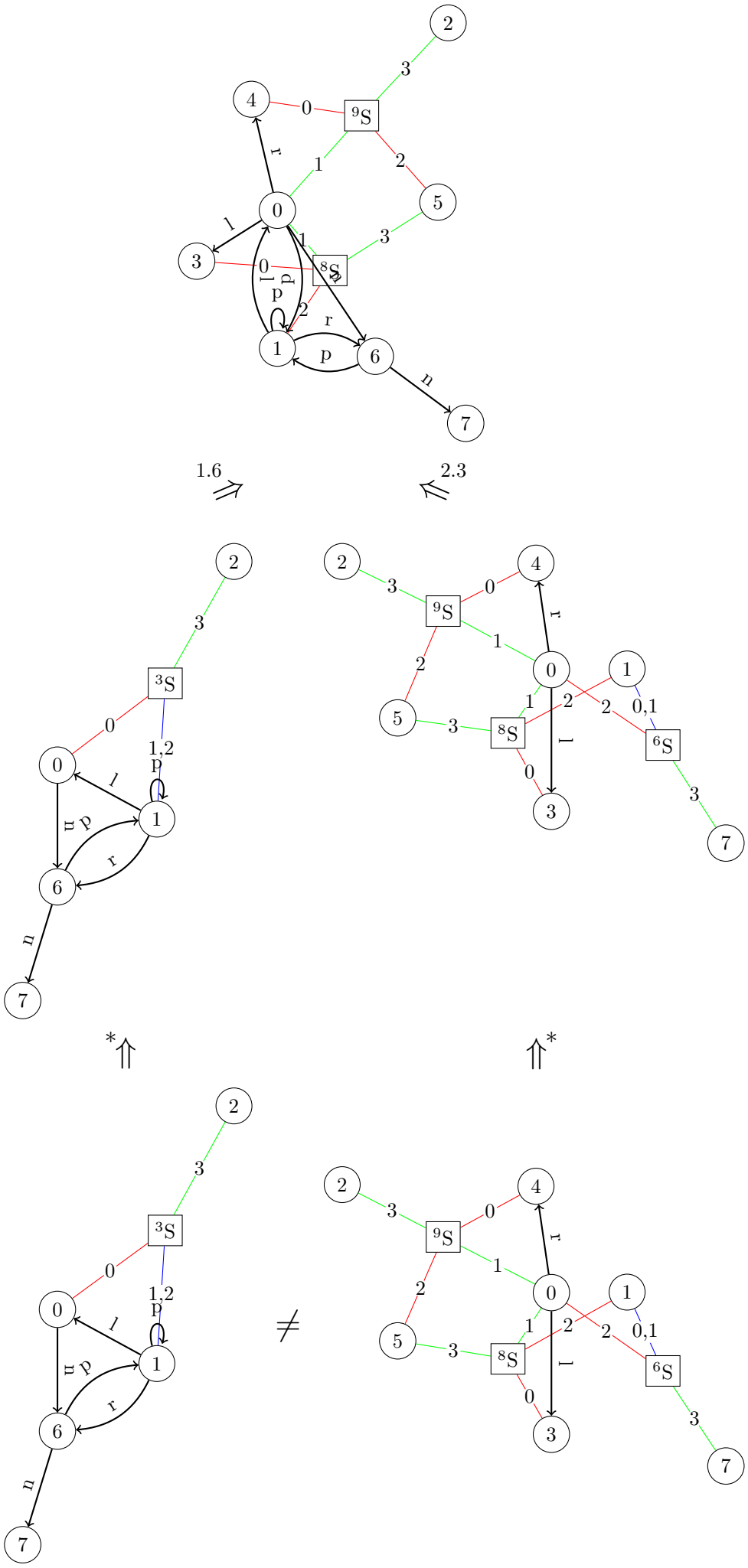
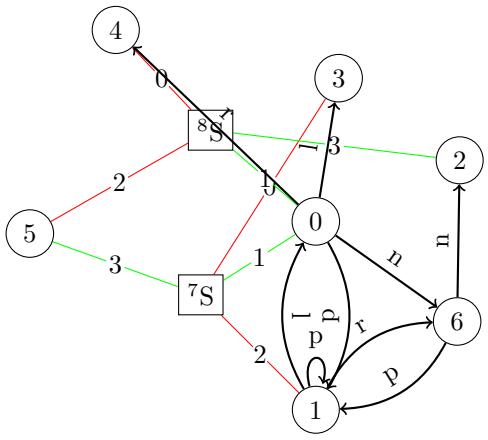


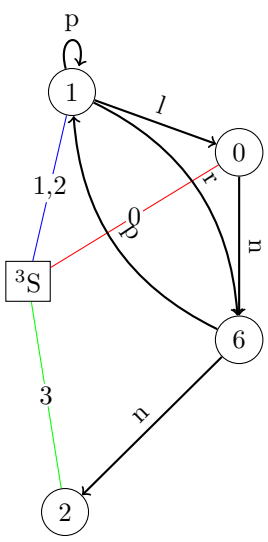
### 1.55 Critical Pair (Not Joinable)



## 1.56 Critical Pair (Not Joinable)




1.6 2.3

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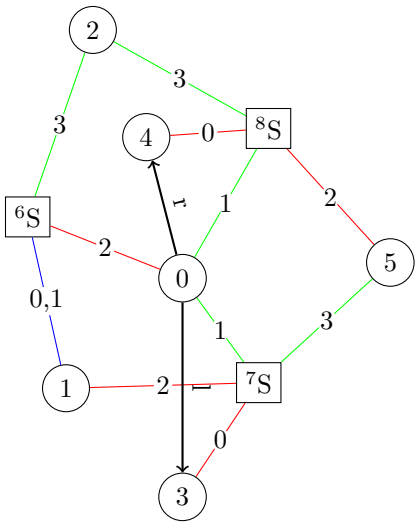


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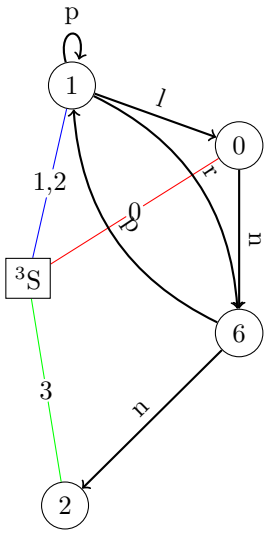


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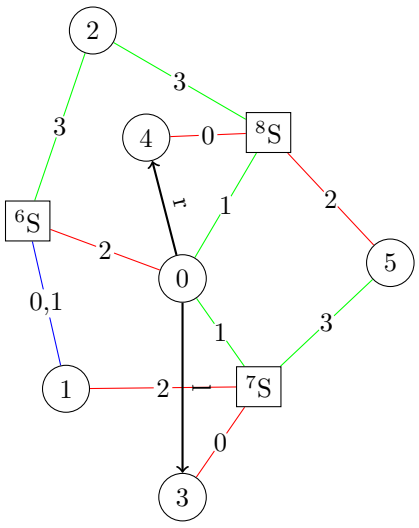
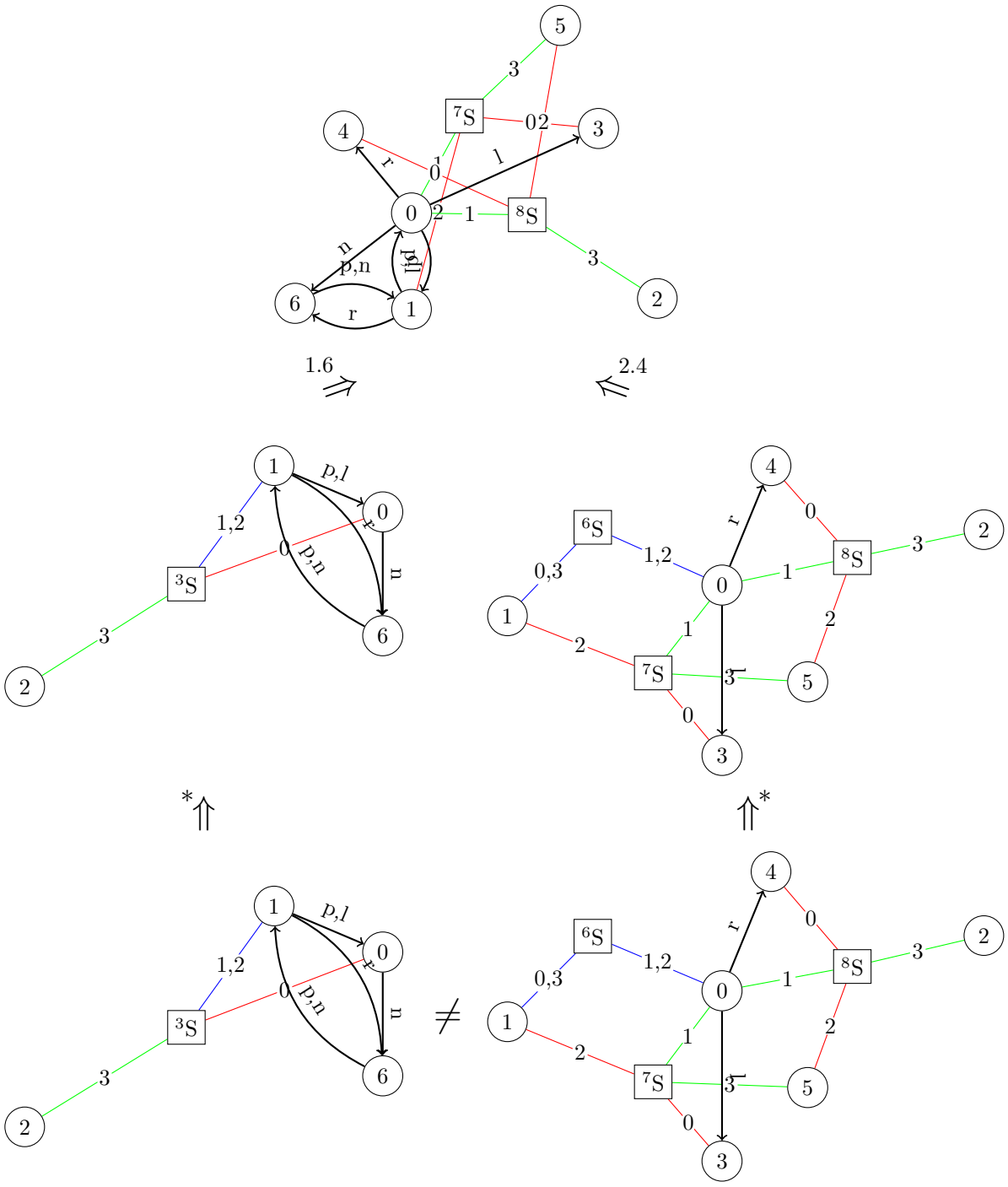
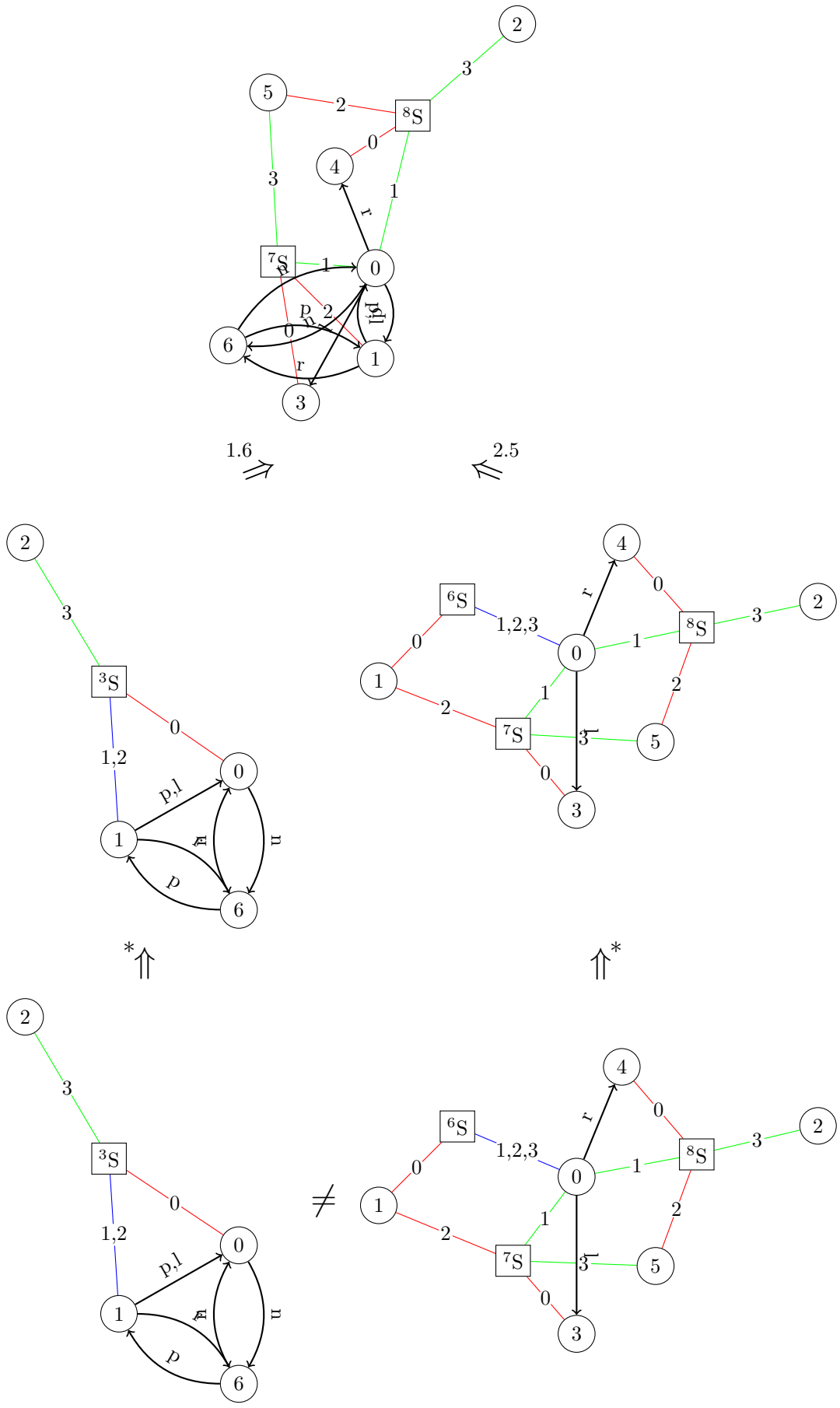


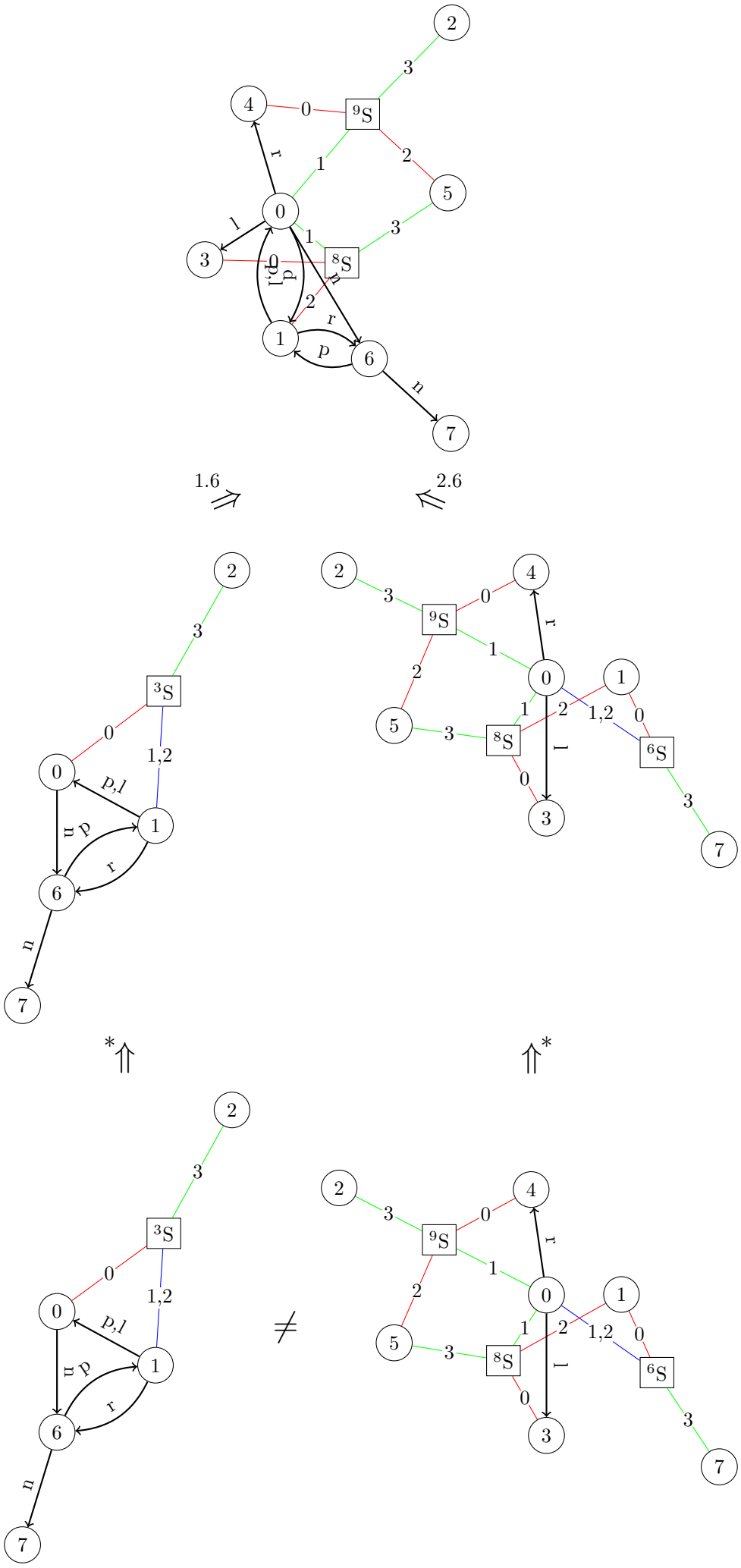
### 1.57 Critical Pair (Not Joinable)



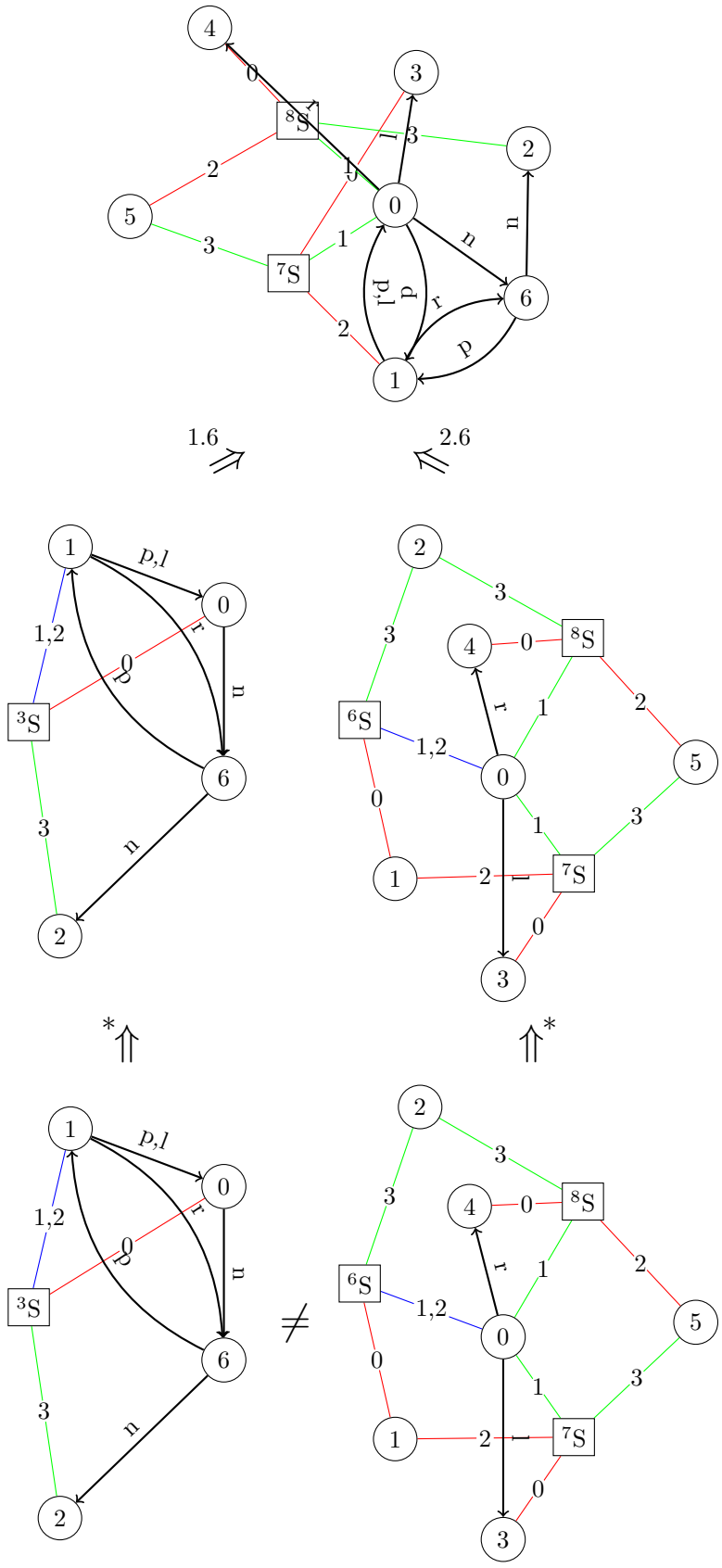
## 1.58 Critical Pair (Not Joinable)



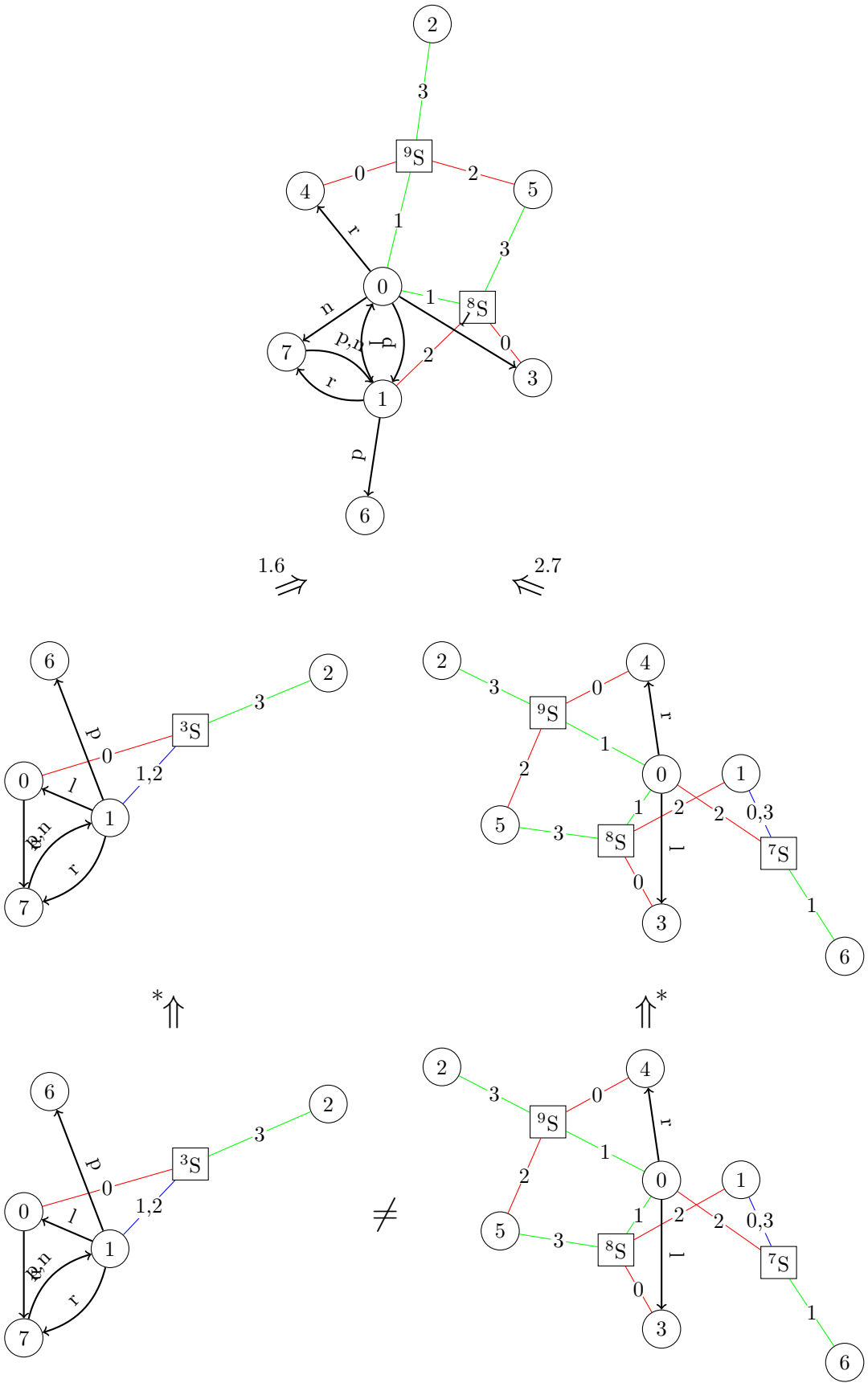
## 1.59 Critical Pair (Not Joinable)



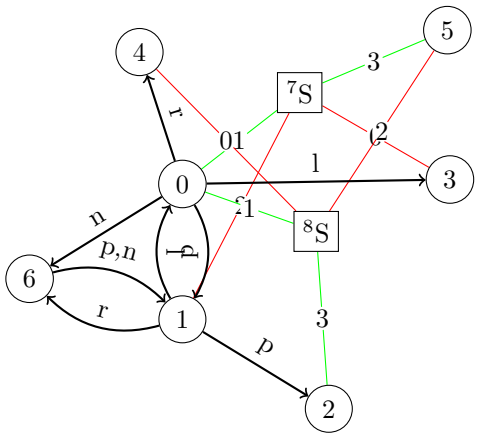
## 1.60 Critical Pair (Not Joinable)



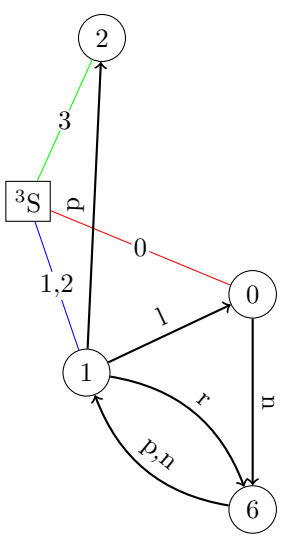
### 1.61 Critical Pair (Not Joinable)



## 1.62 Critical Pair (Not Joinable)




1.6 2.7

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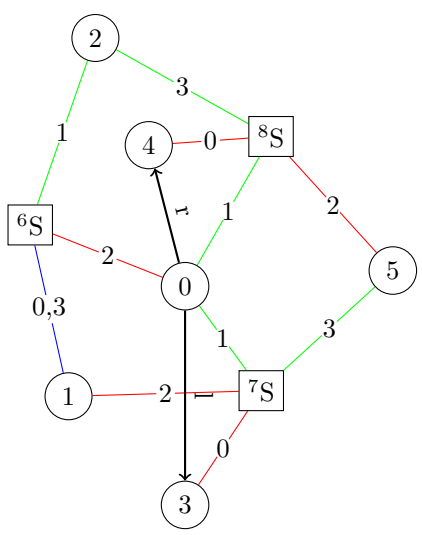


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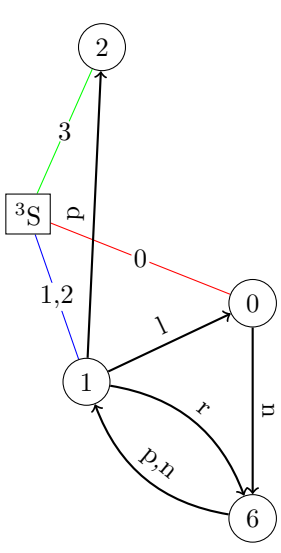


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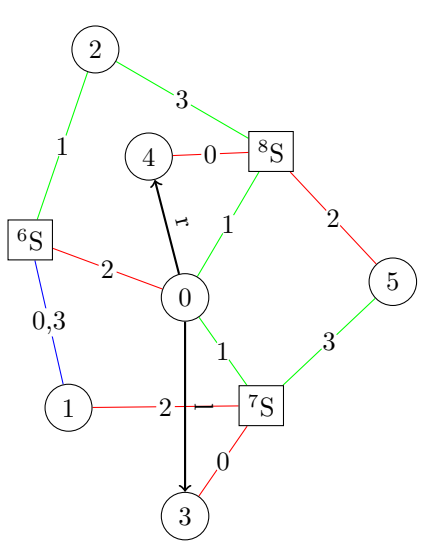
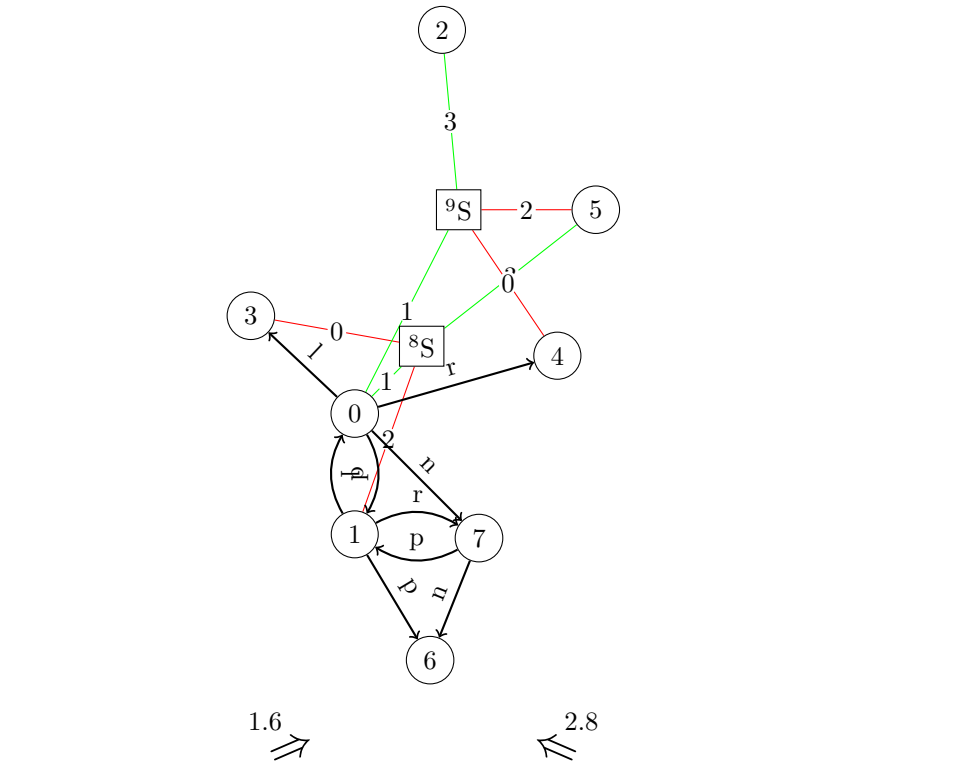
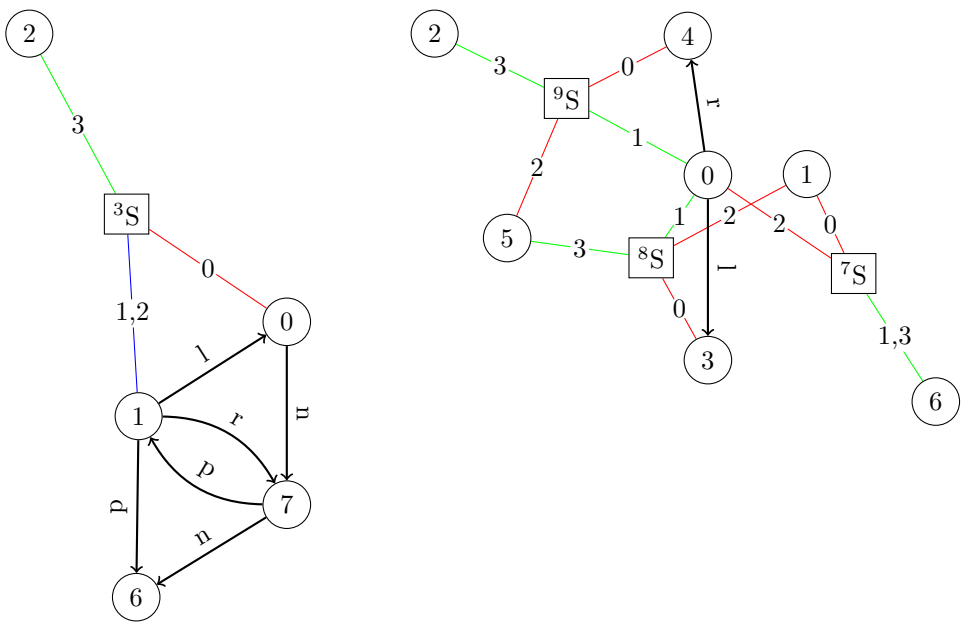


### 1.63 Critical Pair (Not Joinable)




1.6 ⇉ 2.8 ⇇

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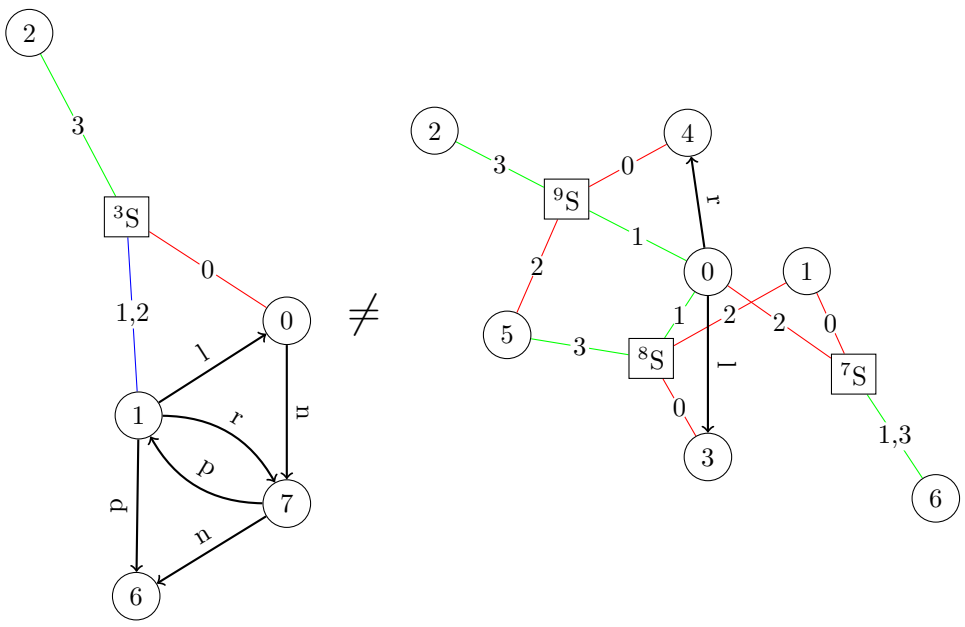
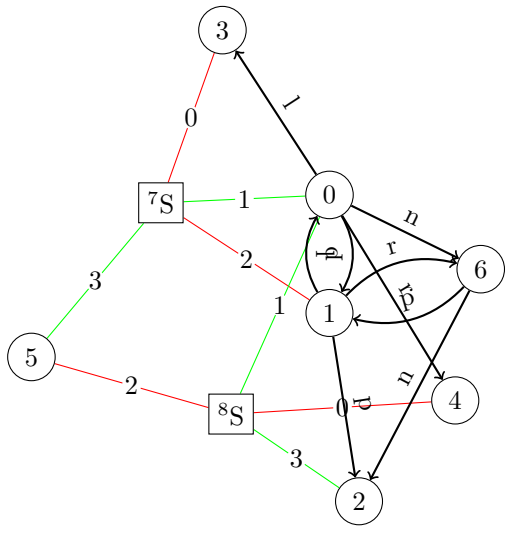
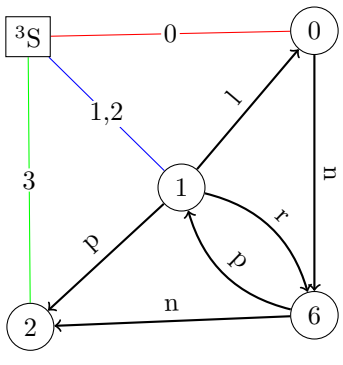
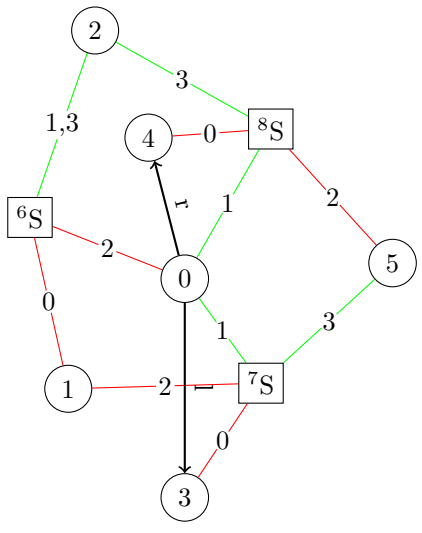


## 1.64 Critical Pair (Not Joinable)




1.6 ⇉ 2.8 ⇇

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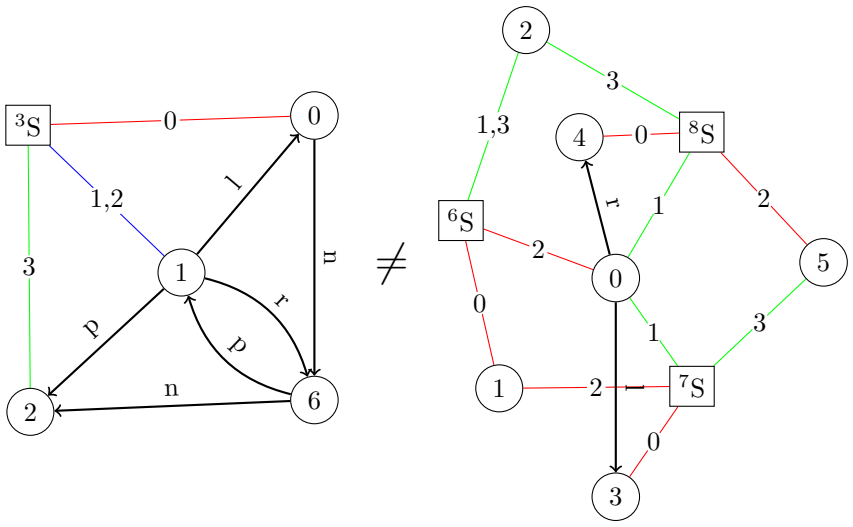
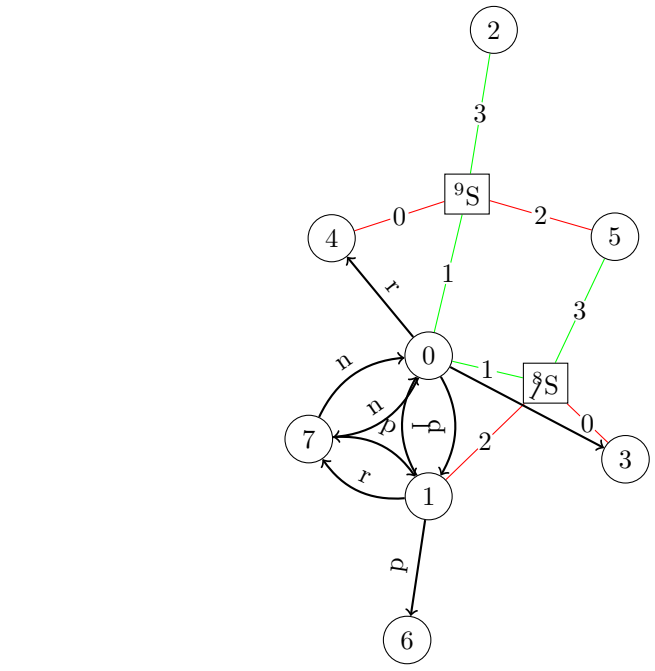
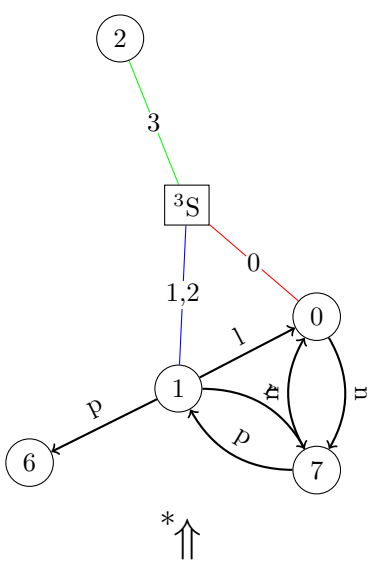


### 1.65 Critical Pair (Not Joinable)




1.6 2.9

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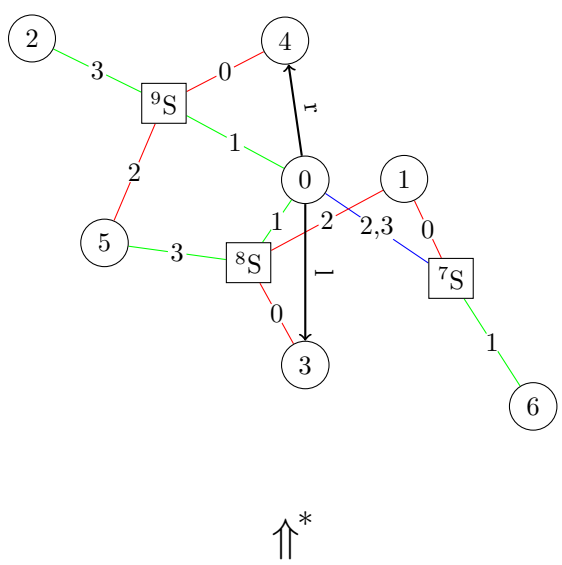


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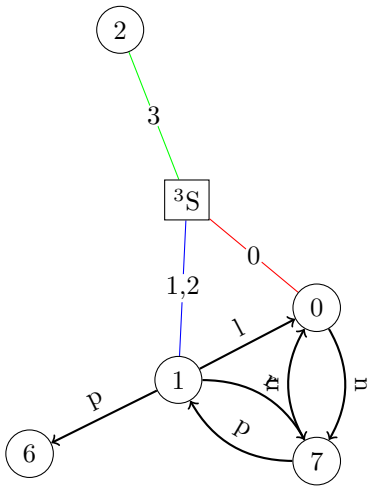


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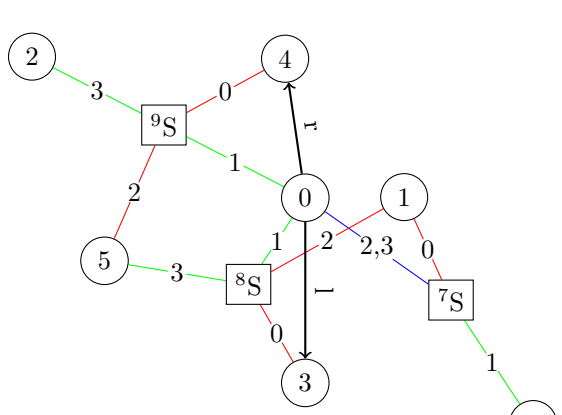
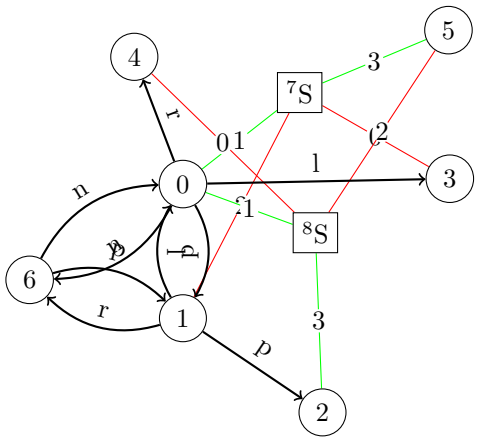
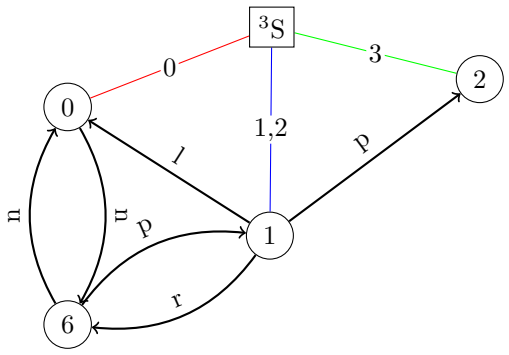


## 1.66 Critical Pair (Not Joinable)




1.6 ⇉ 2.9 ⇇

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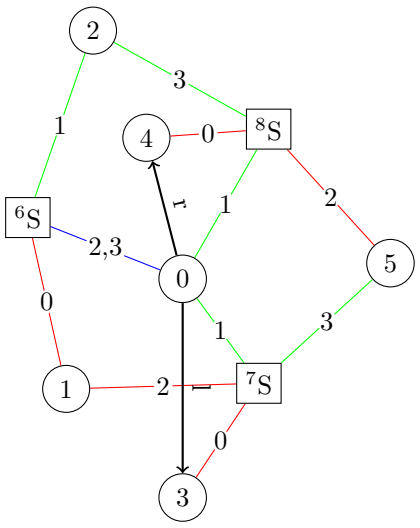


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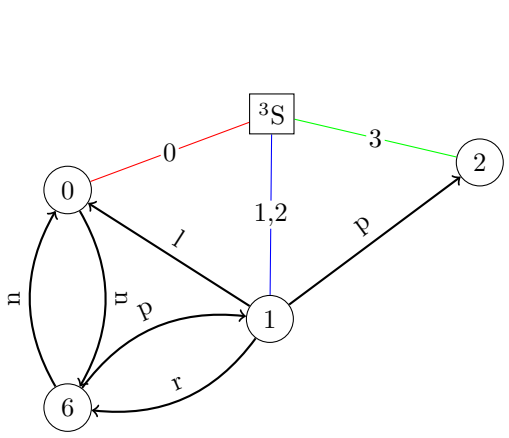


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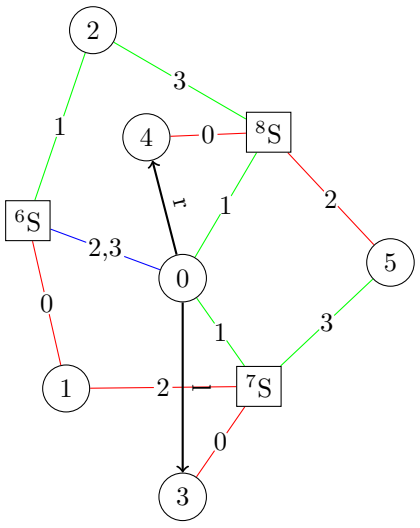
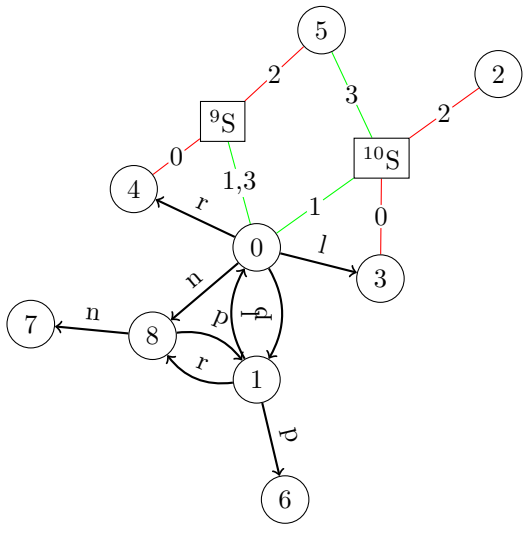
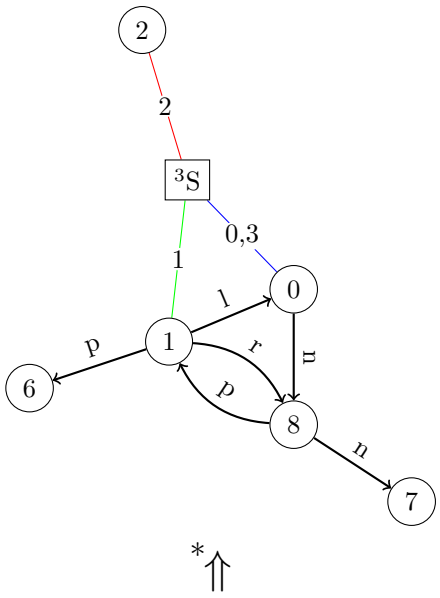


## 1.67 Critical Pair (Not Joinable)




1.7 ⇉ 2

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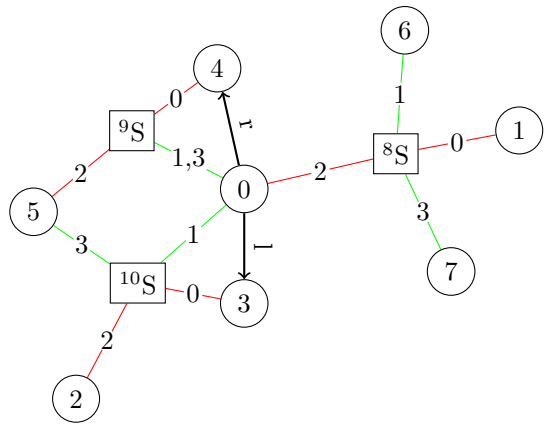


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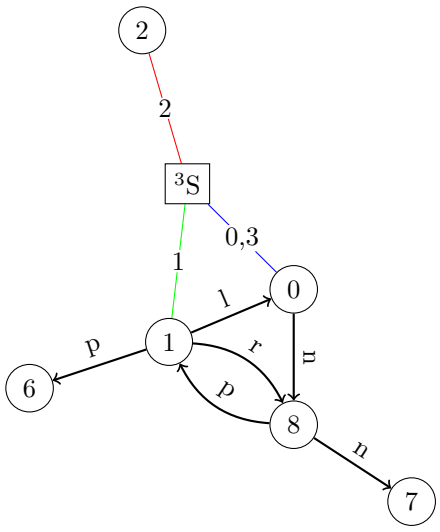
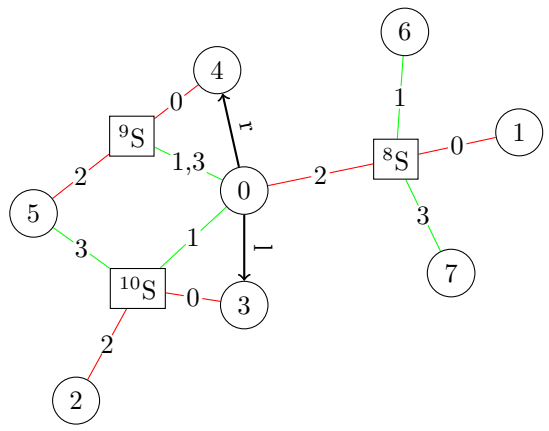
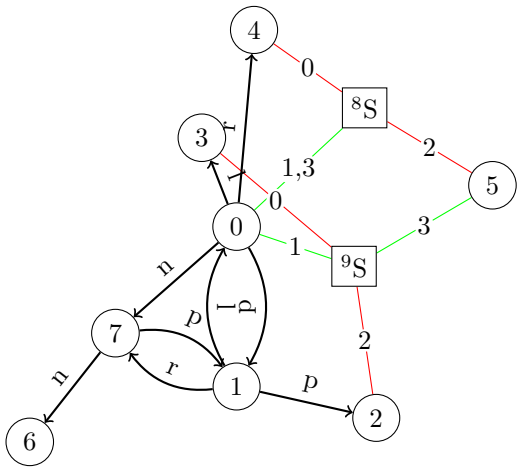
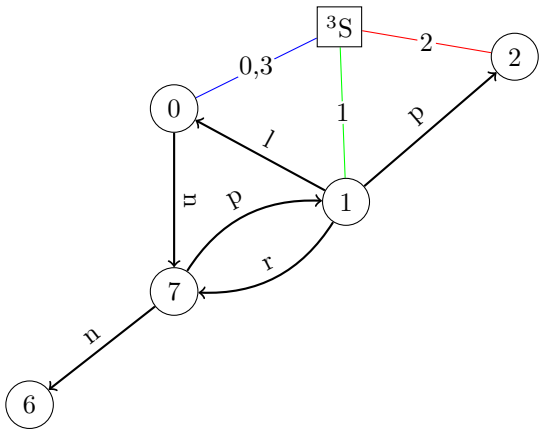


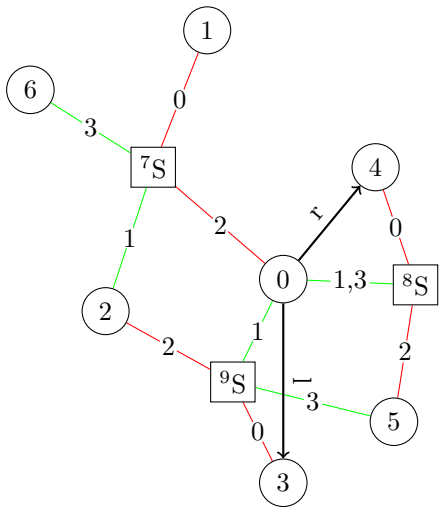



## 1.68 Critical Pair (Not Joinable)




1.7 ⇉ 2

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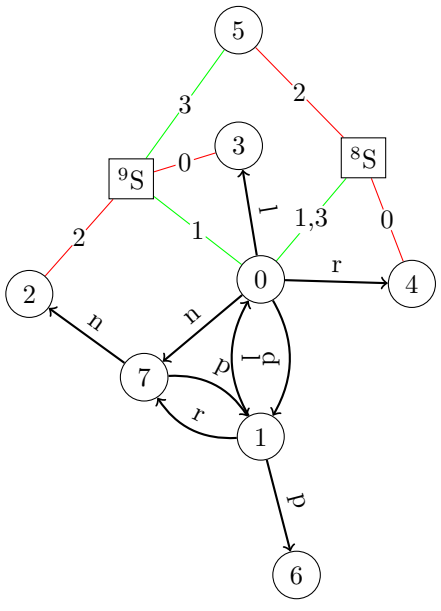
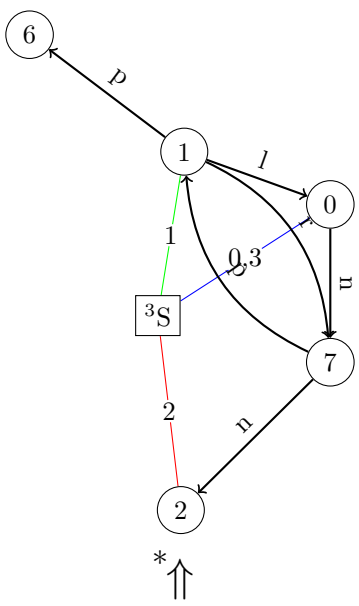
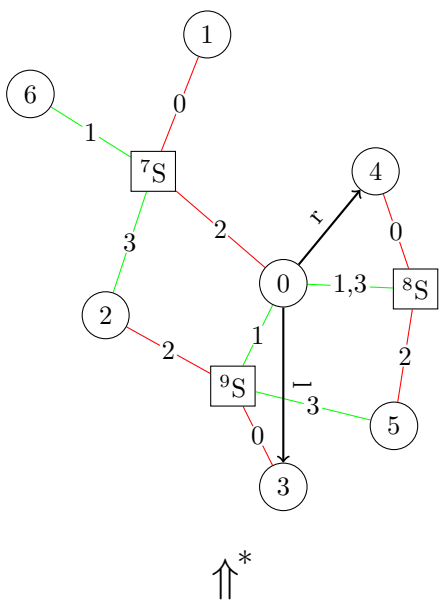
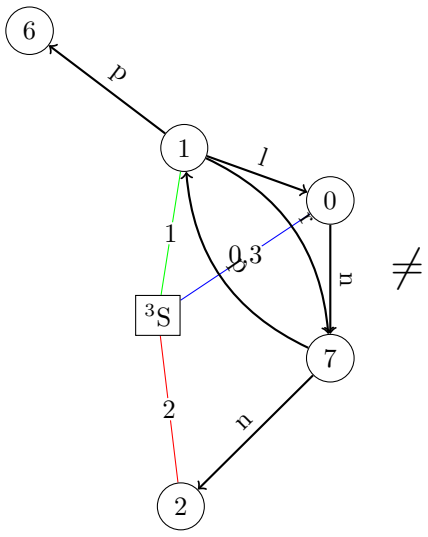
### 1.69 Critical Pair (Not Joinable)




1.7 ⇛ 2 ⇚

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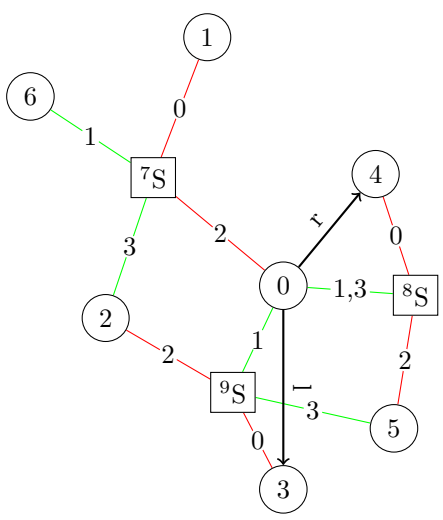
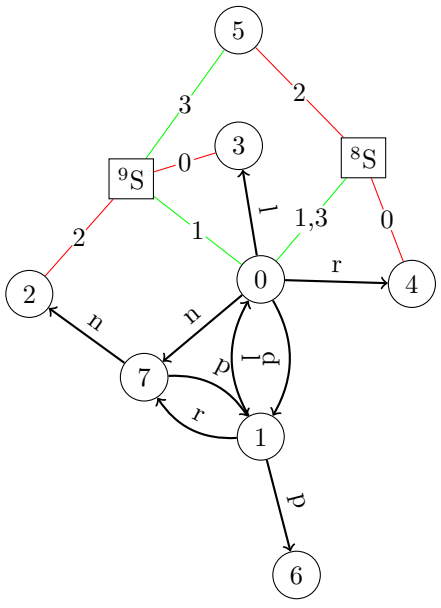
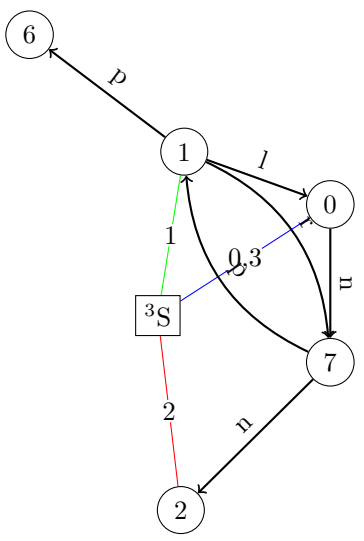


## 1.70 Critical Pair (Not Joinable)




1.7 ⇛ 2 ⇚

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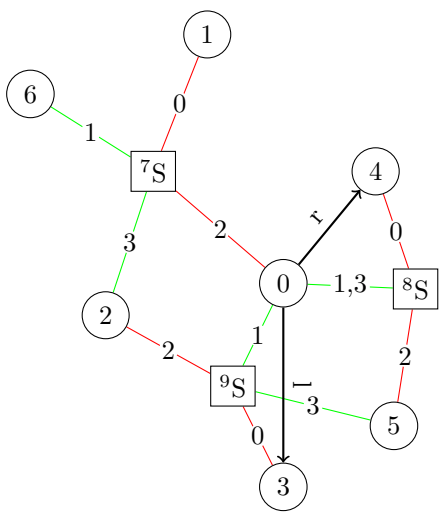


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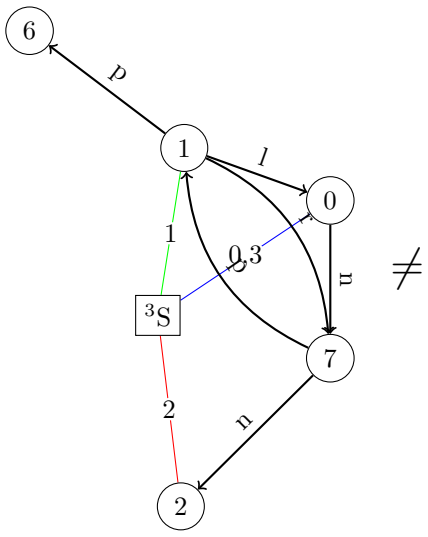


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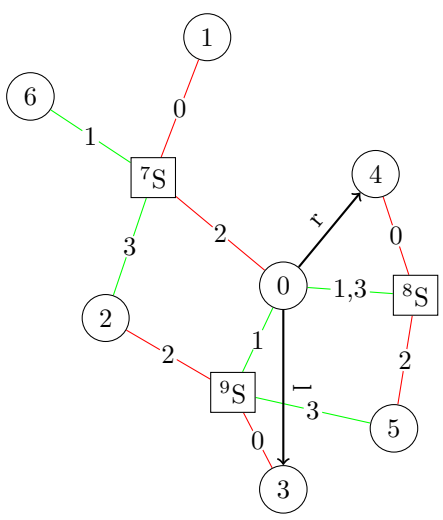
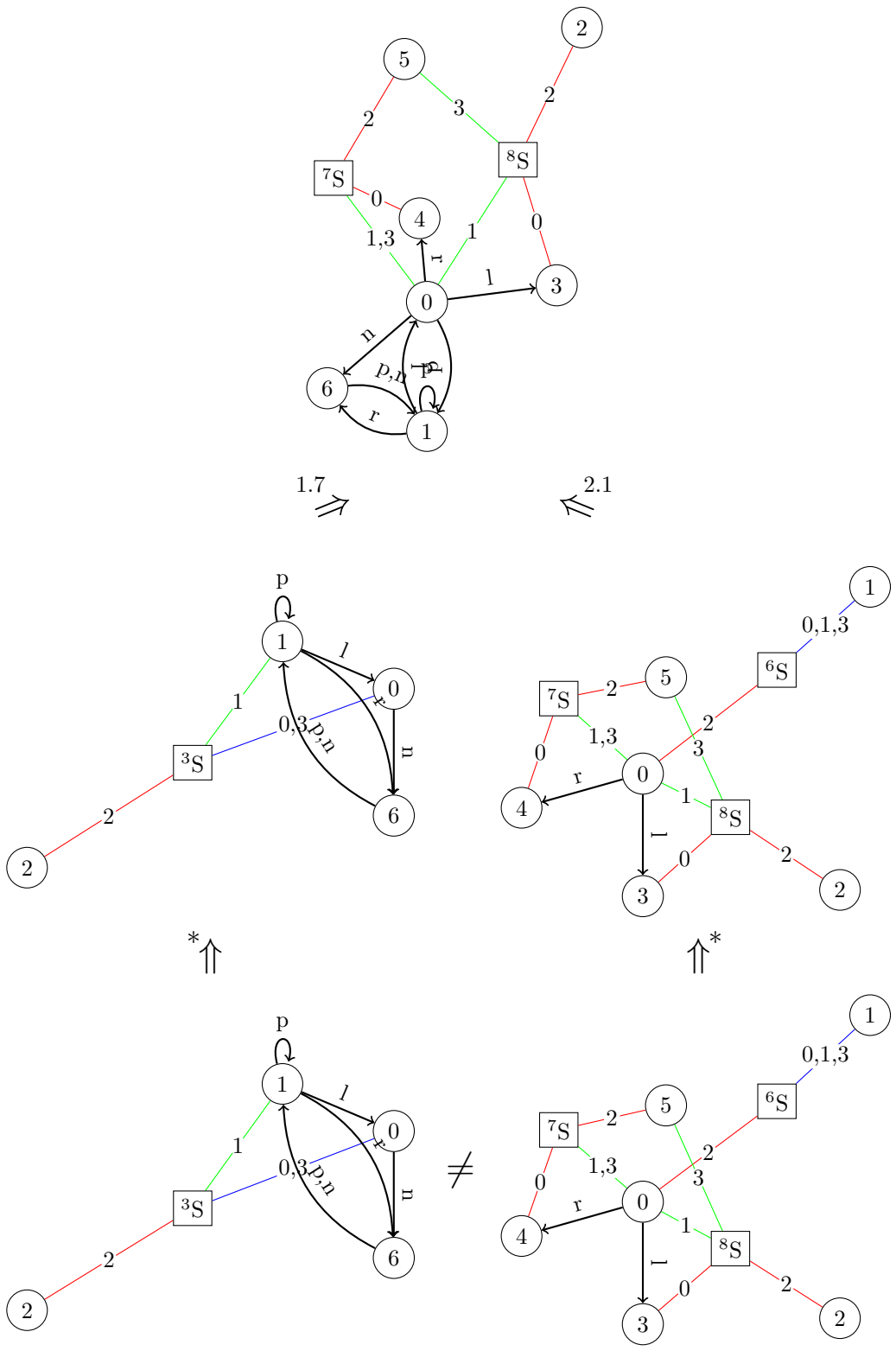
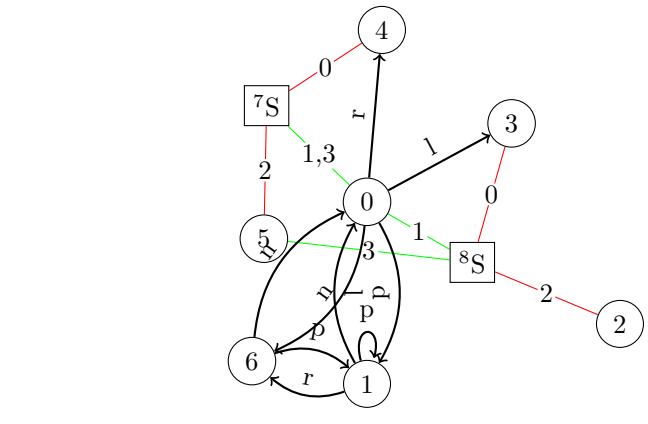


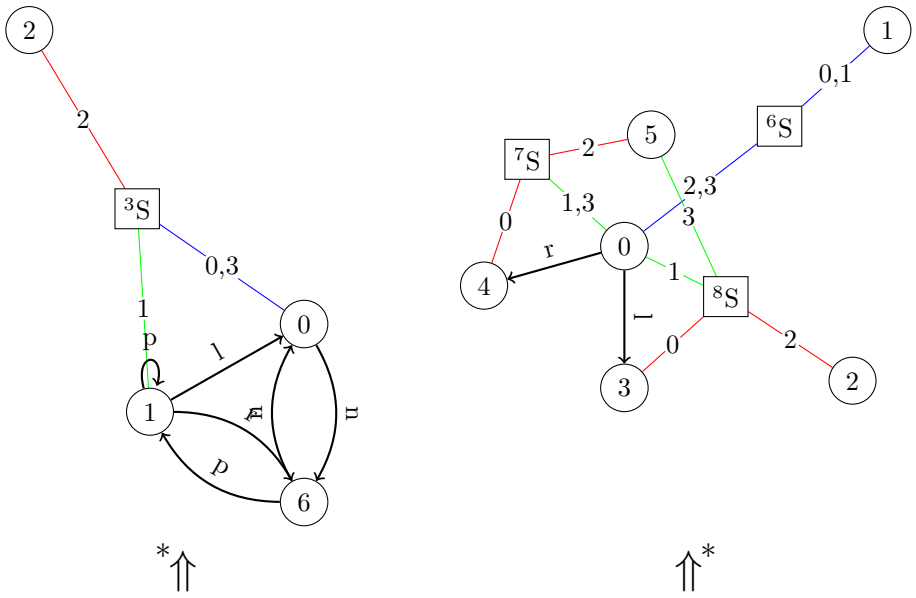
### 1.71 Critical Pair (Not Joinable)



### 1.72 Critical Pair (Not Joinable)




1.7 2.2

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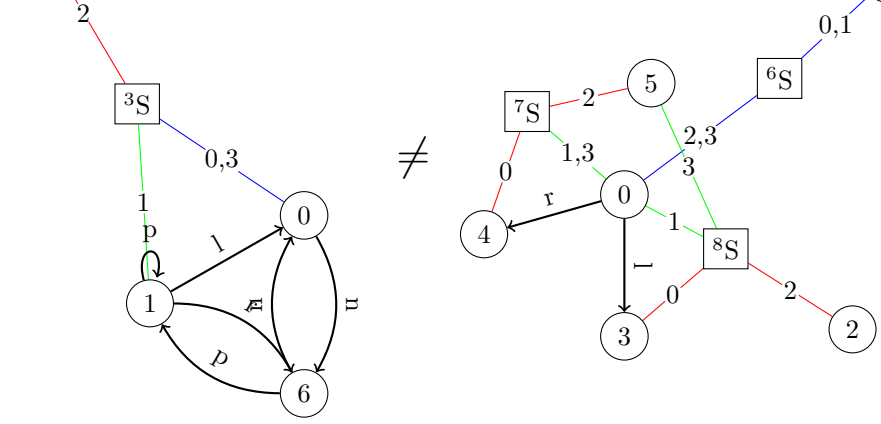
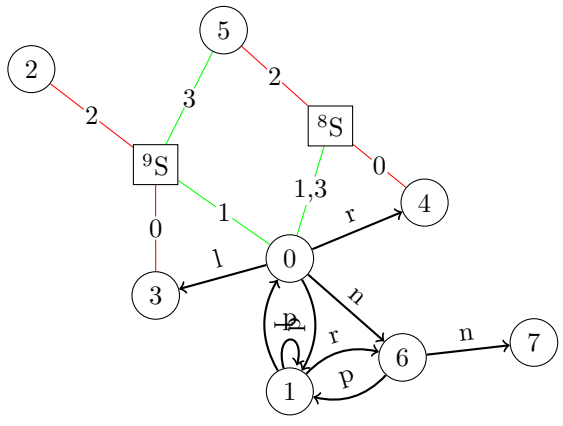
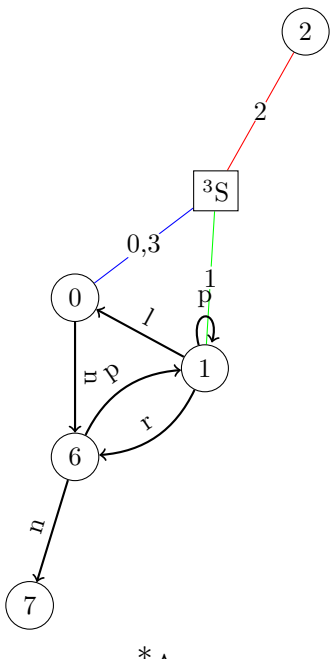


### 1.73 Critical Pair (Not Joinable)




1.7 2.3

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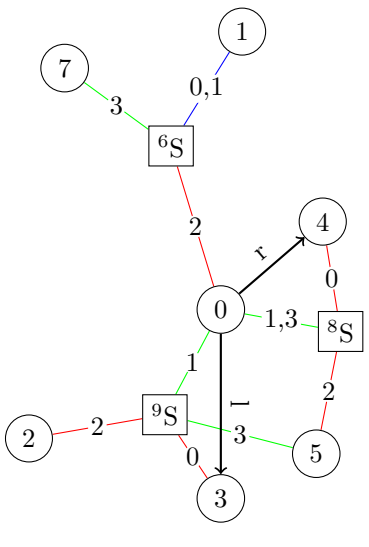


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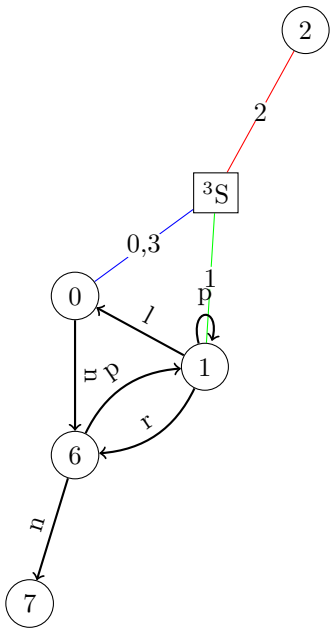


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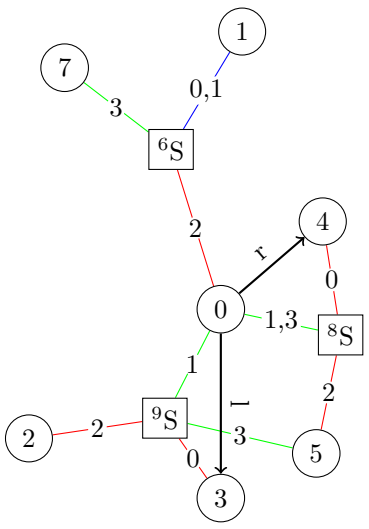
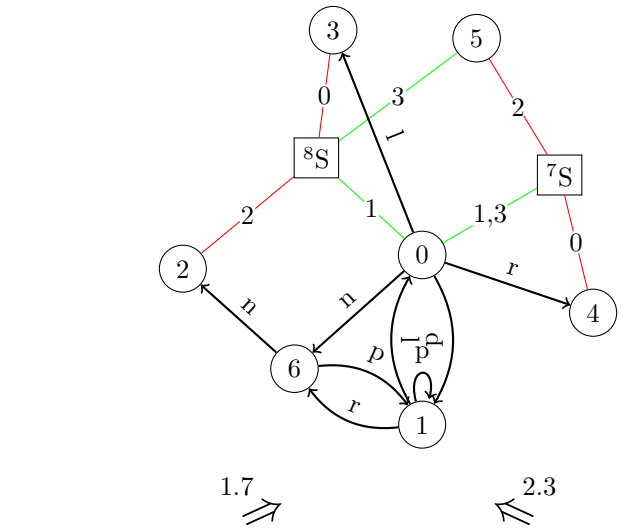
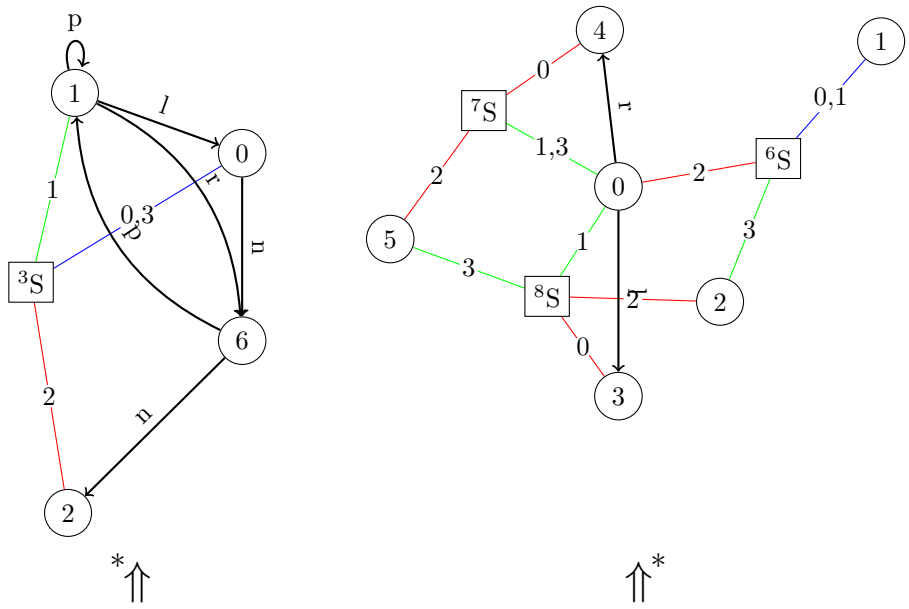


## 1.74 Critical Pair (Not Joinable)




1.7 ⇛ 2.3 ⇚

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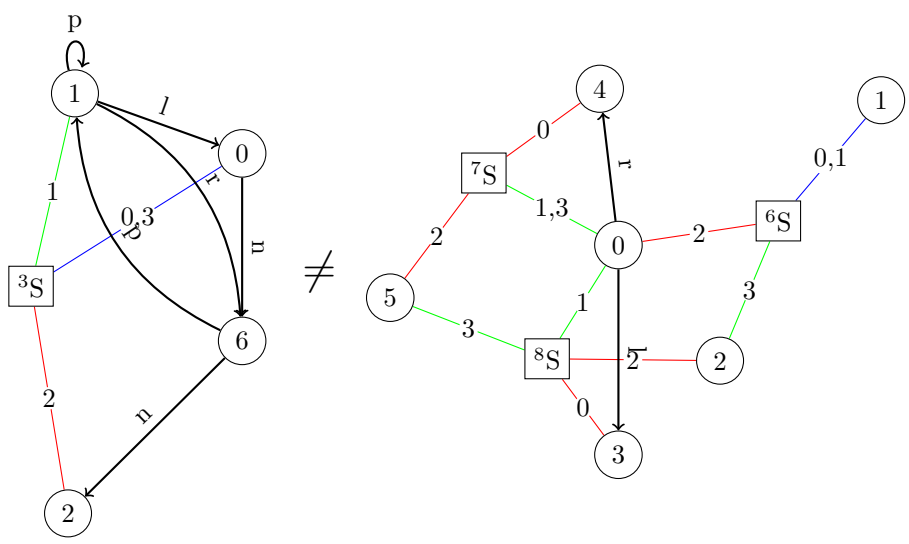
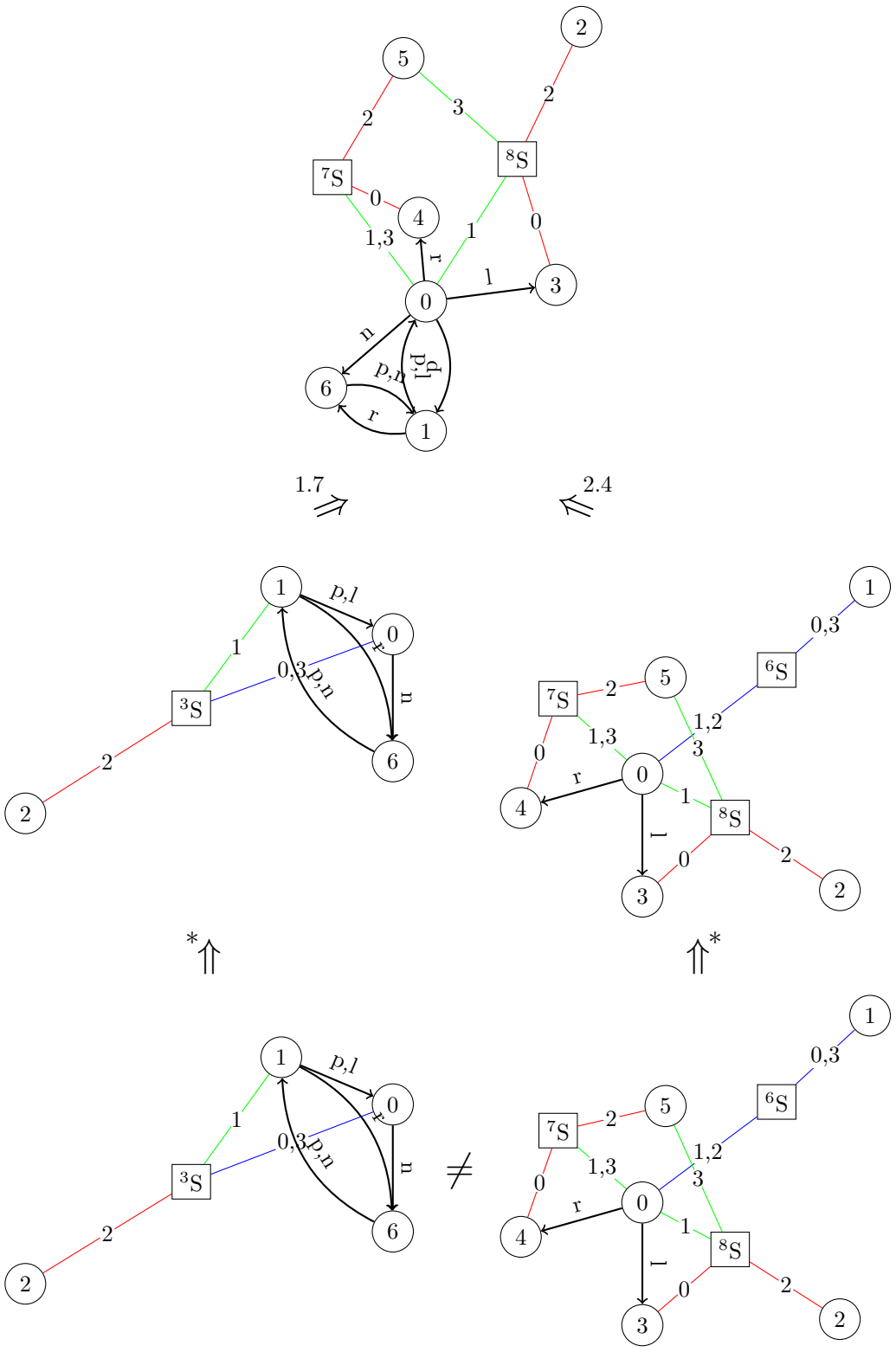
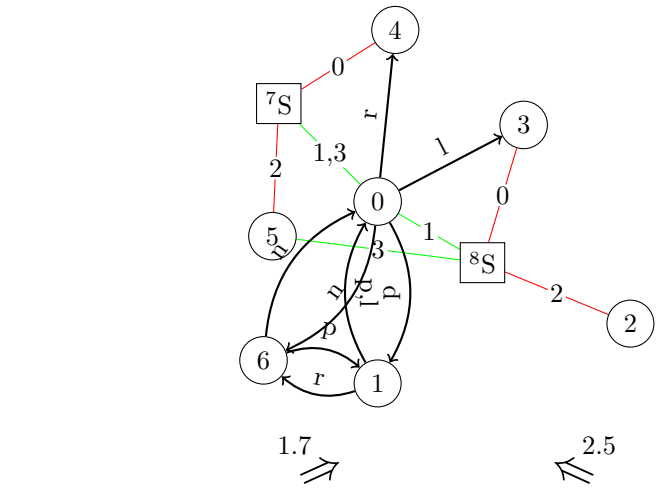


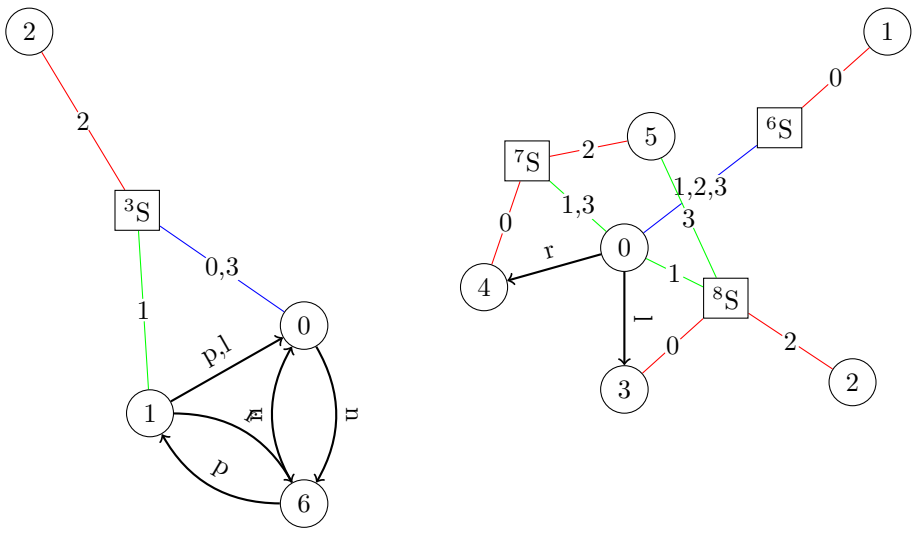
## 1.75 Critical Pair (Not Joinable)



## 1.76 Critical Pair (Not Joinable)




1.7 ⇉ 2.5 ⇇

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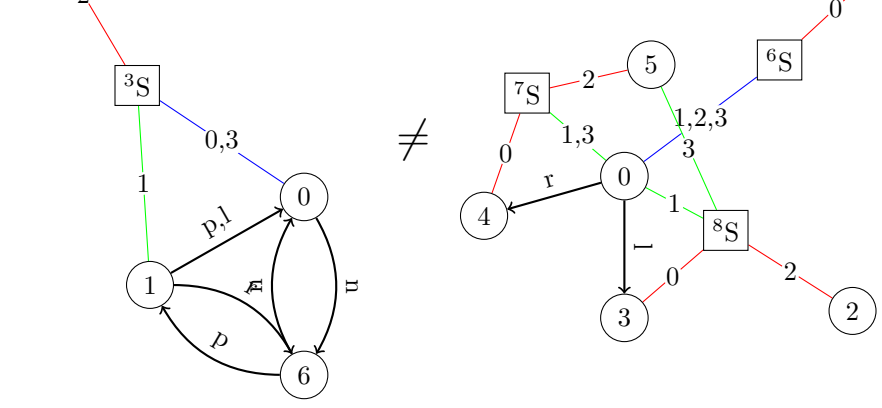
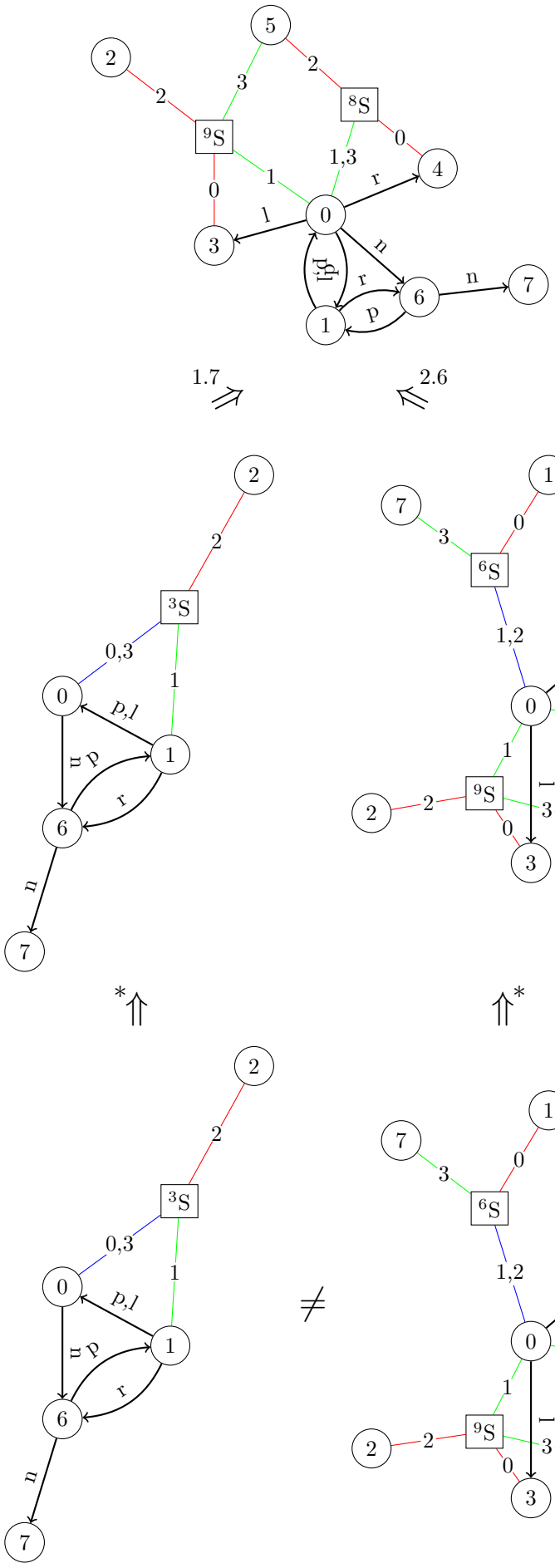
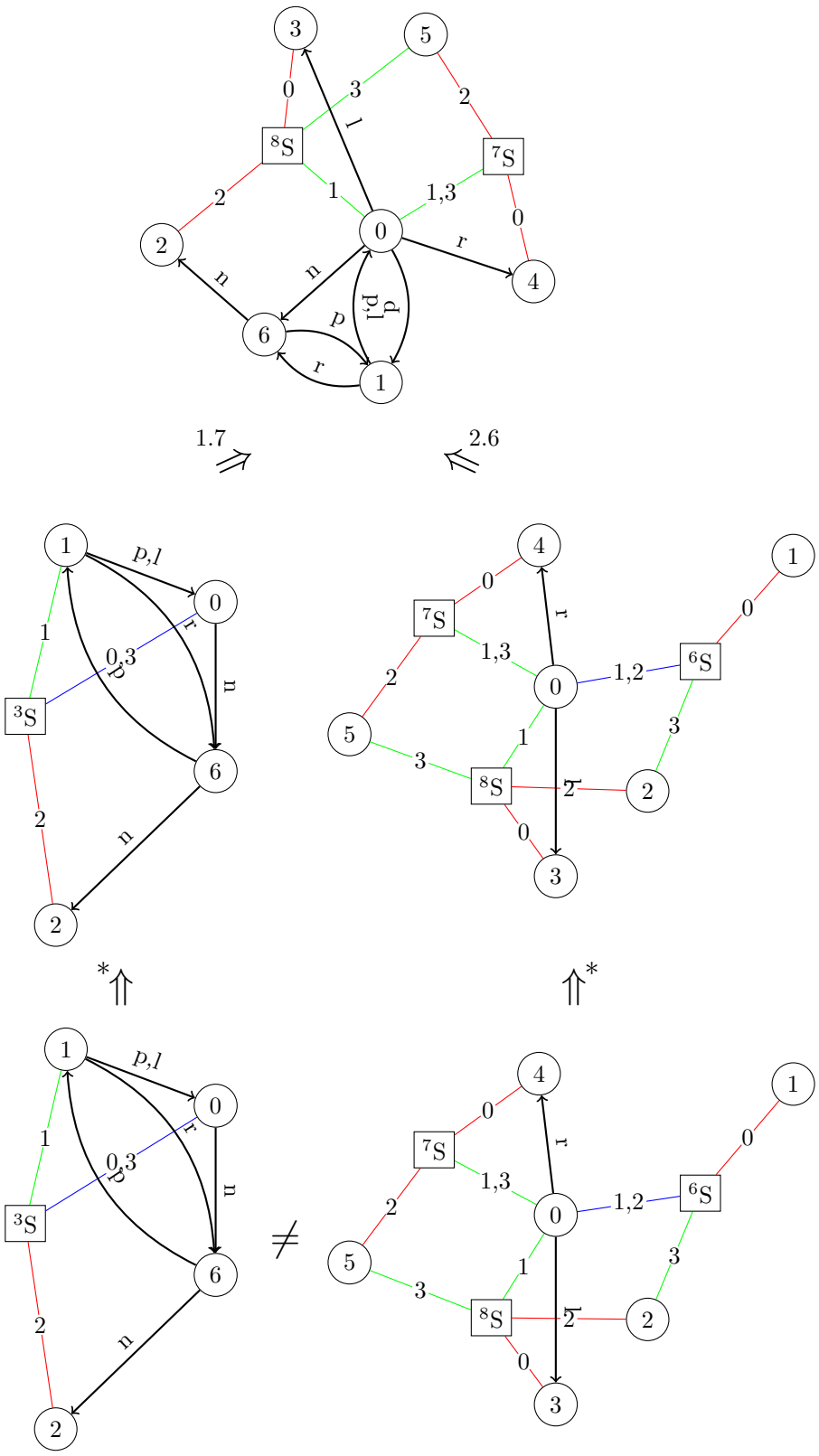


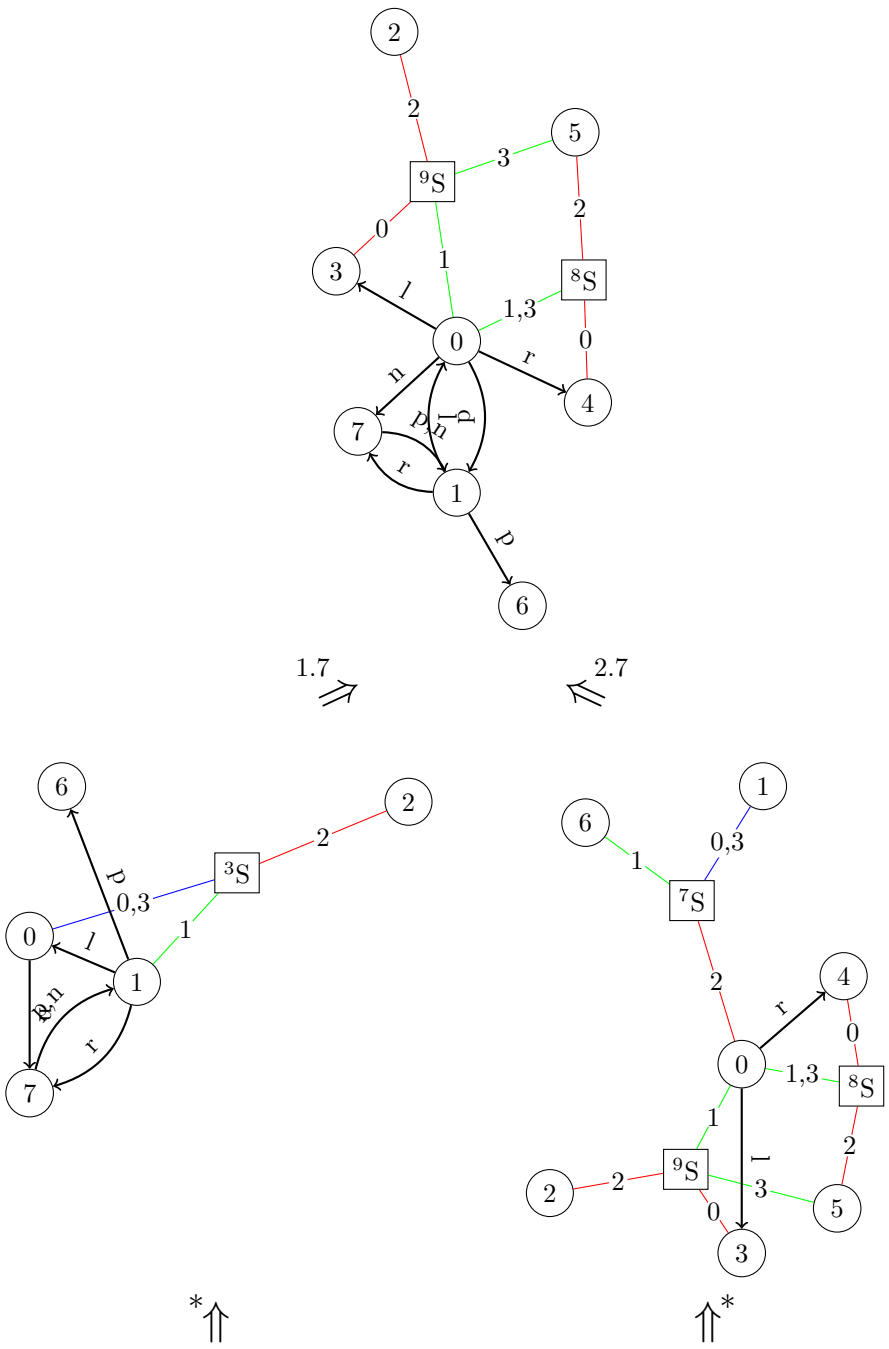
### 1.77 Critical Pair (Not Joinable)

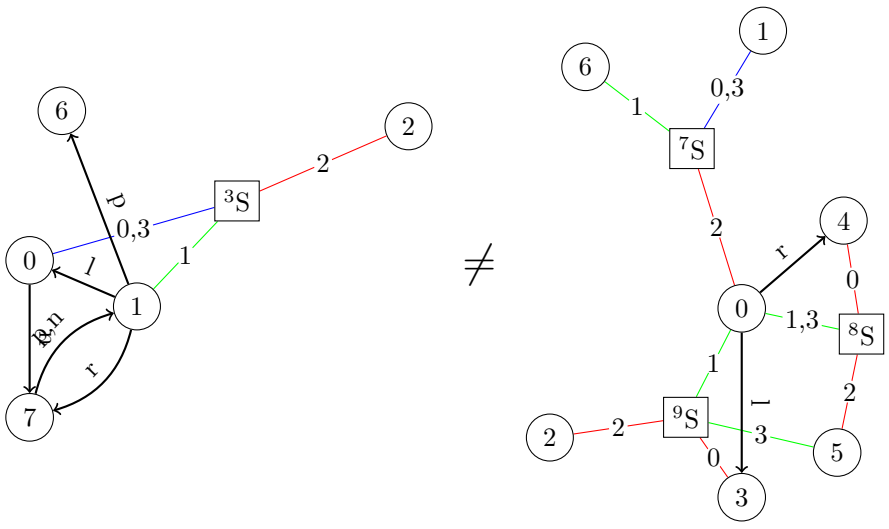


### 1.78 Critical Pair (Not Joinable)

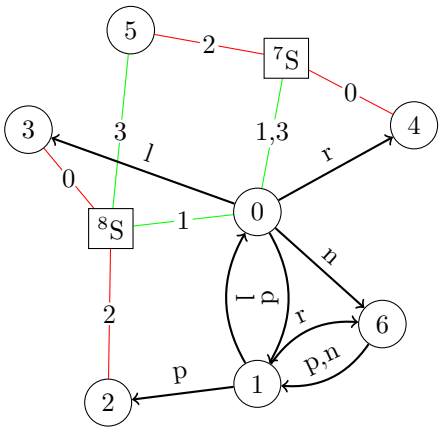


## 1.79 Critical Pair (Not Joinable)

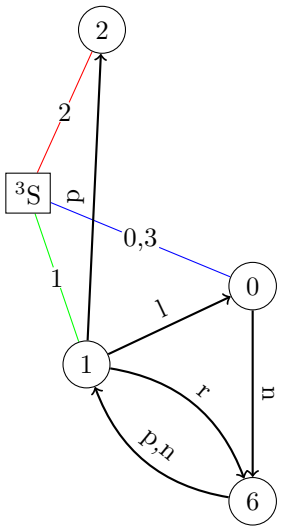


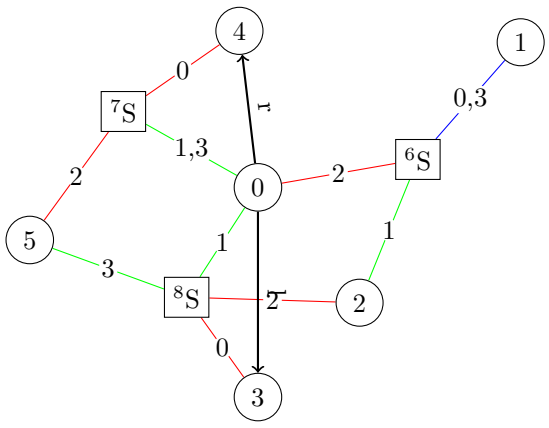



## 1.80 Critical Pair (Not Joinable)




1.7 2.7

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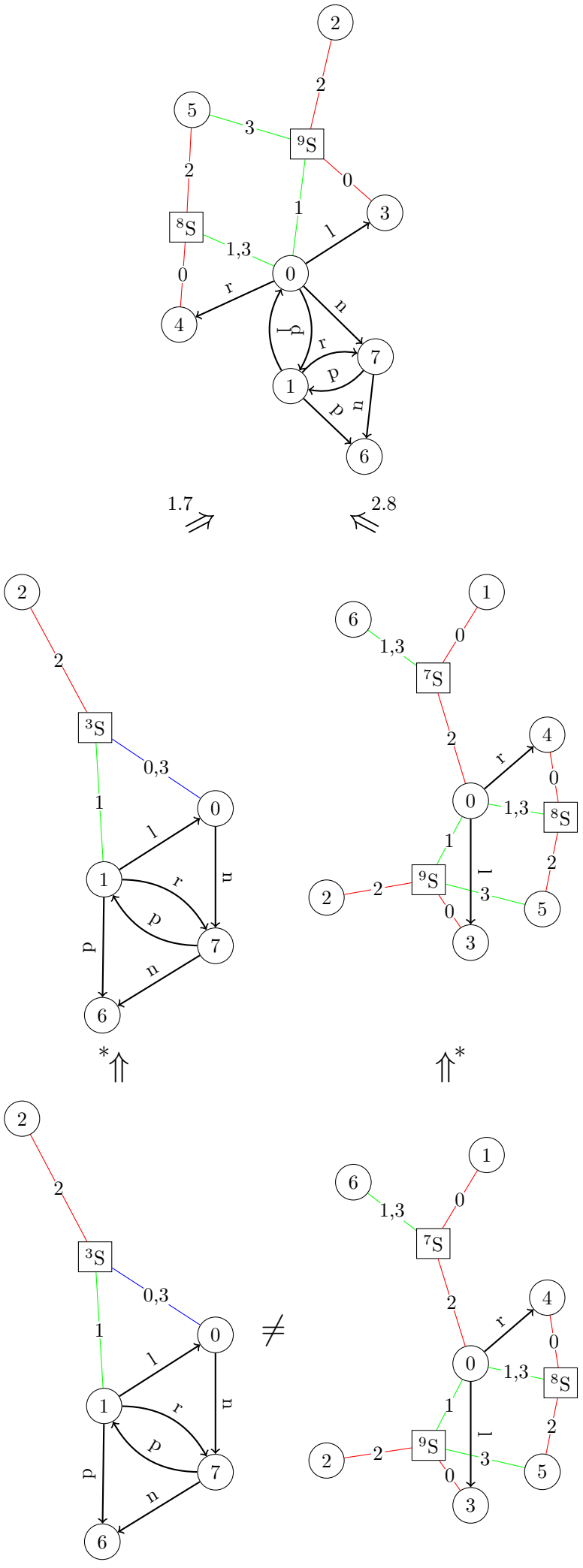
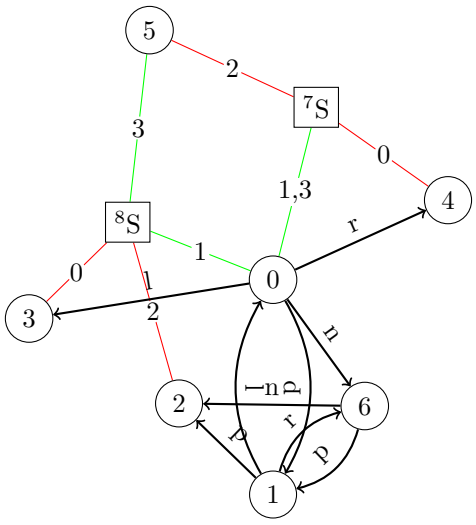
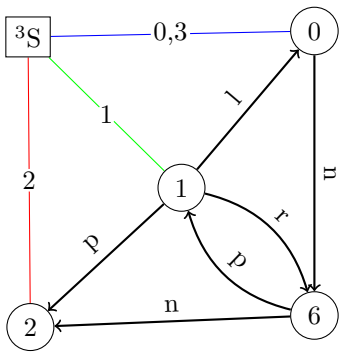
### 1.81 Critical Pair (Not Joinable)

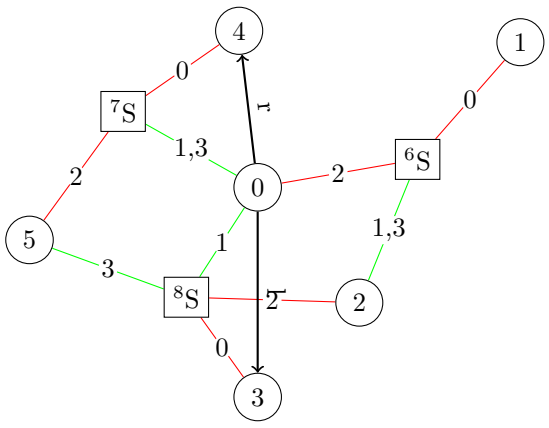


## 1.82 Critical Pair (Not Joinable)




1.7 2.8

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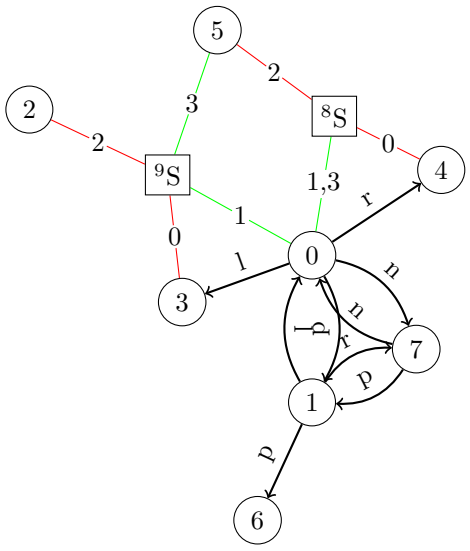
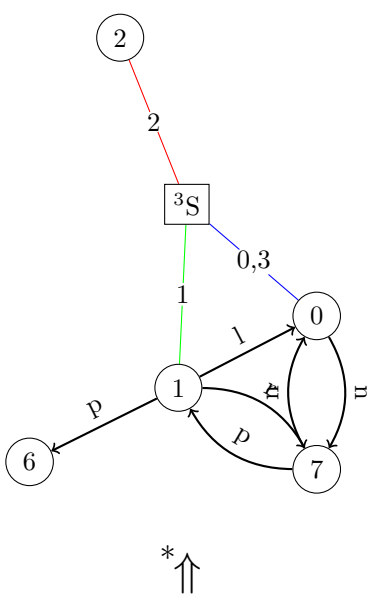
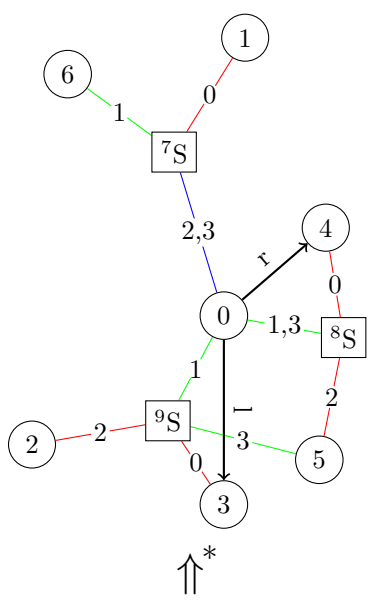
## 1.83 Critical Pair (Not Joinable)




1.7 2.9

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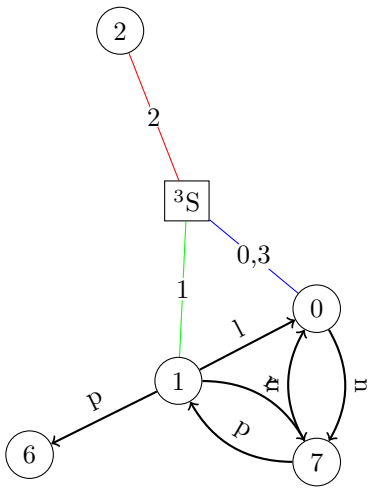
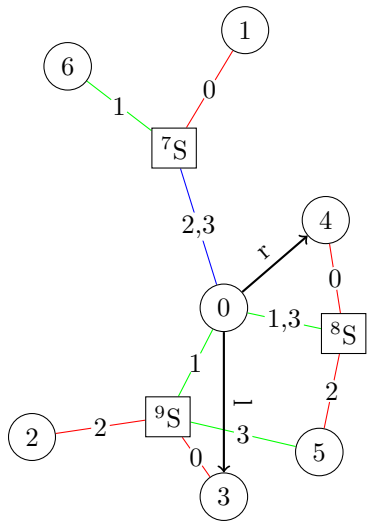
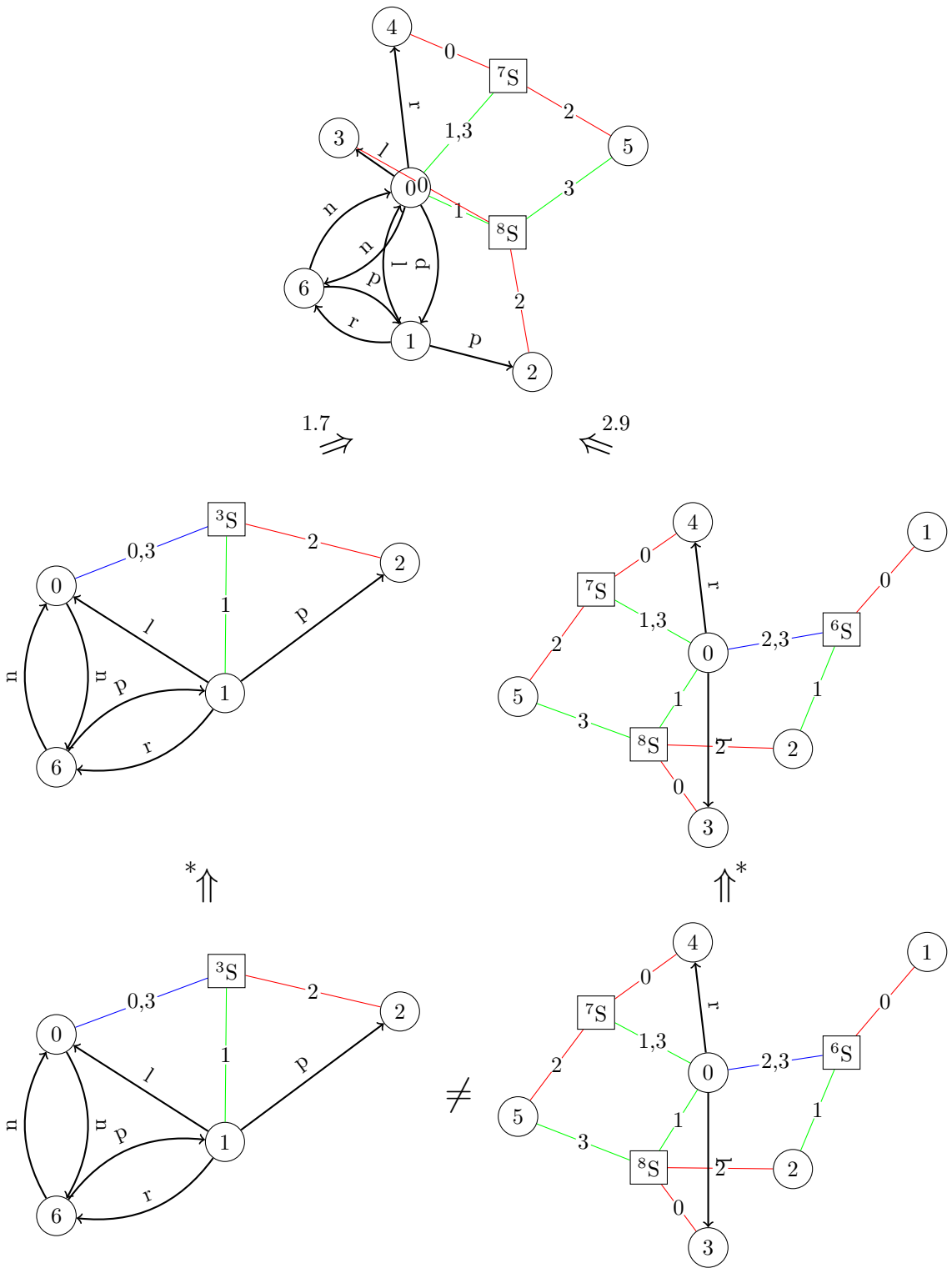
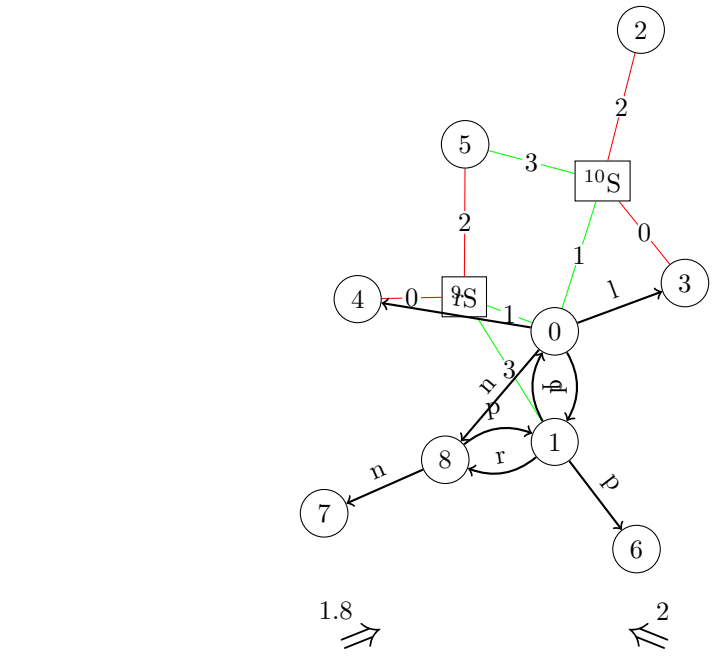


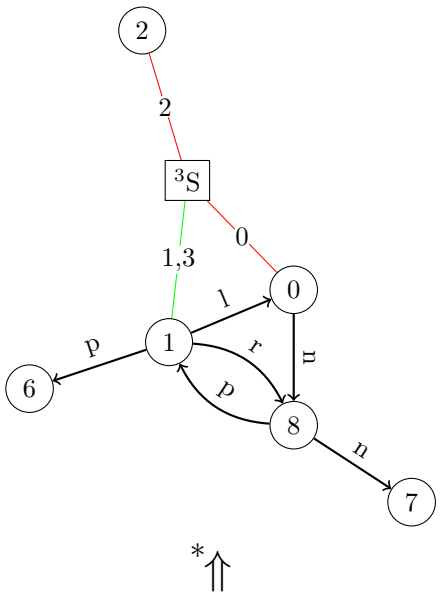



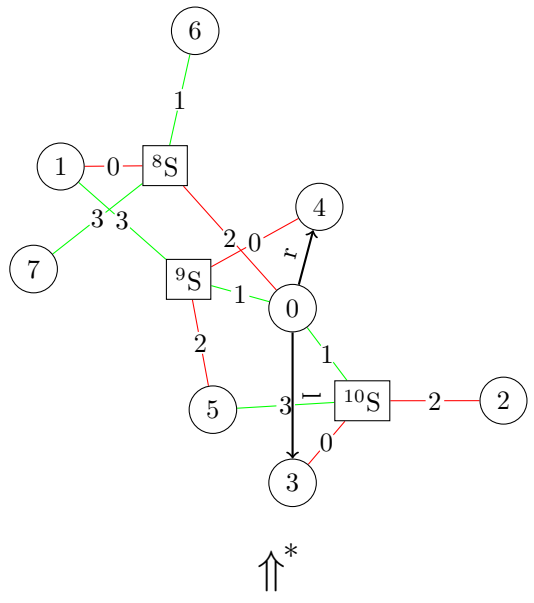
## 1.84 Critical Pair (Not Joinable)



## 1.85 Critical Pair (Not Joinable)

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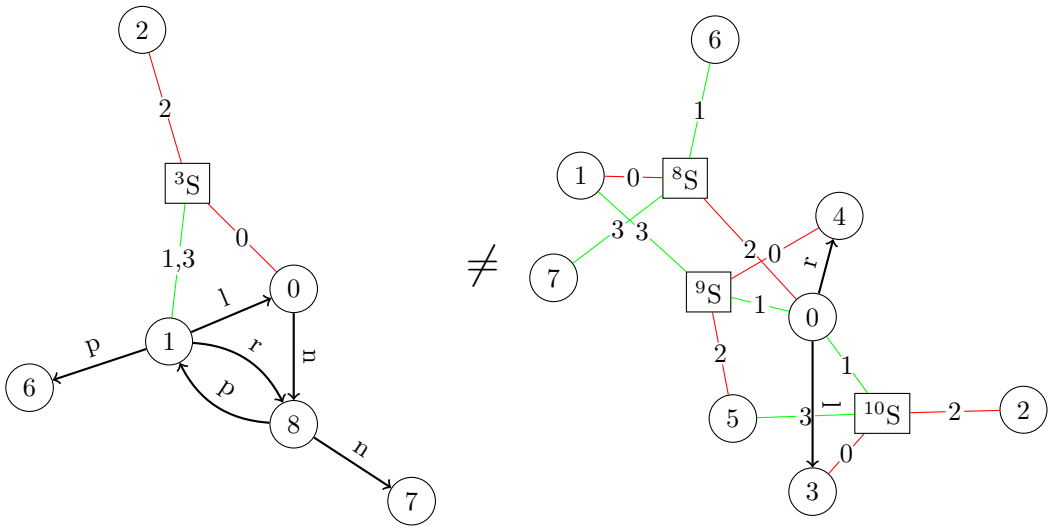
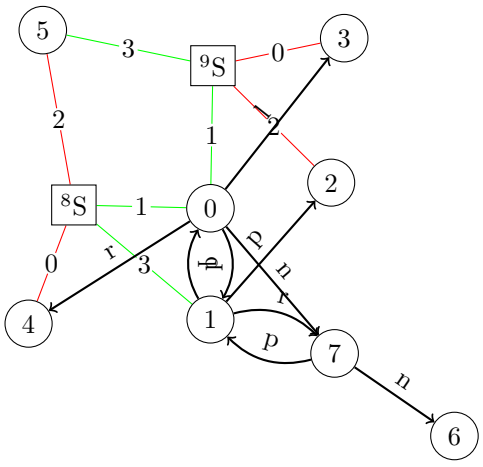
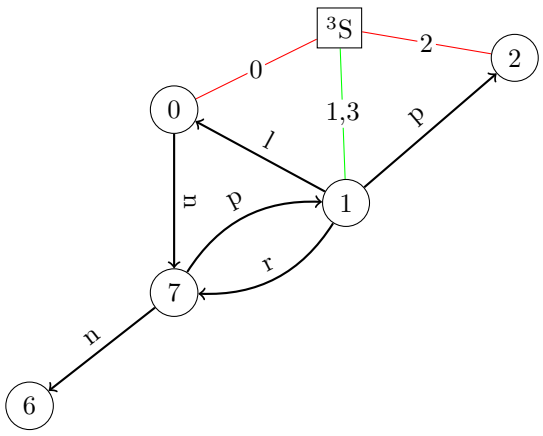
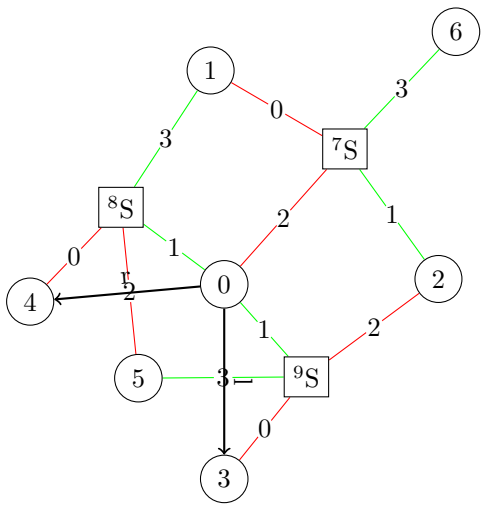


## 1.86 Critical Pair (Not Joinable)




1.8 ⇛ ⇖ 2

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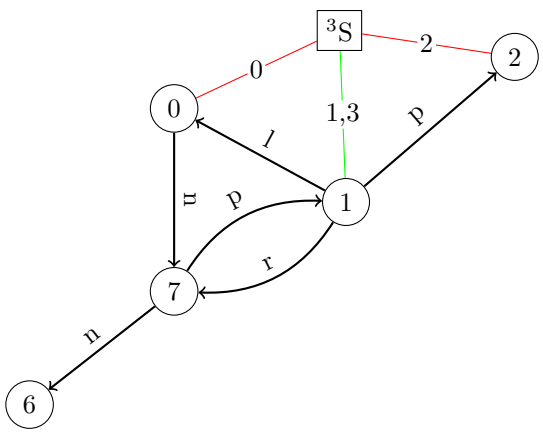


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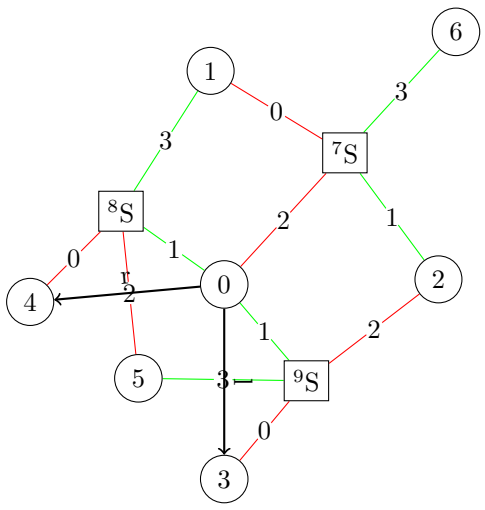
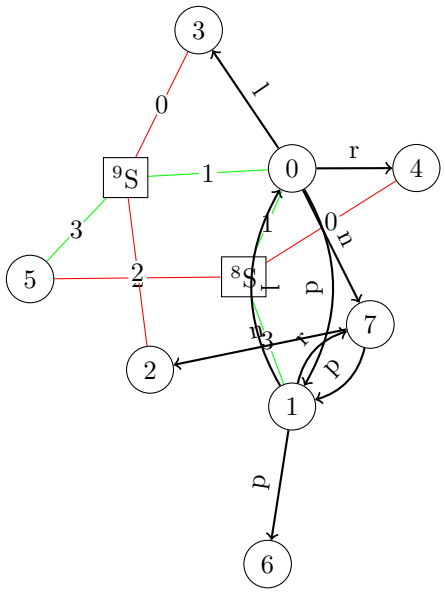
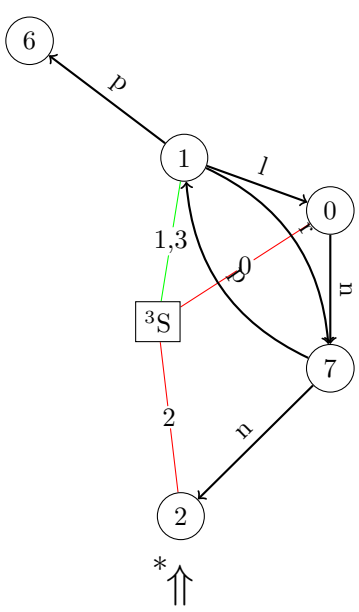
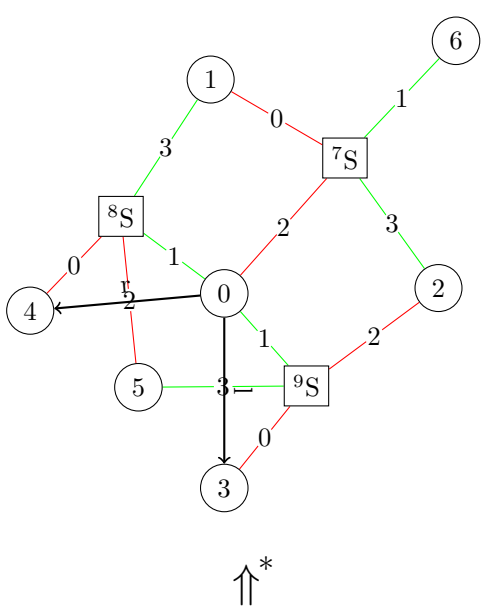


## 1.87 Critical Pair (Not Joinable)




1.8 2

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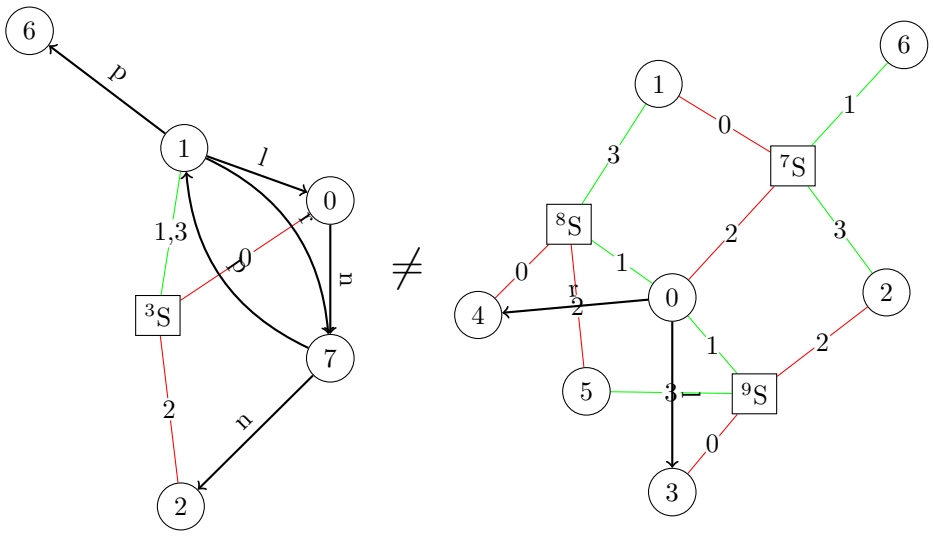
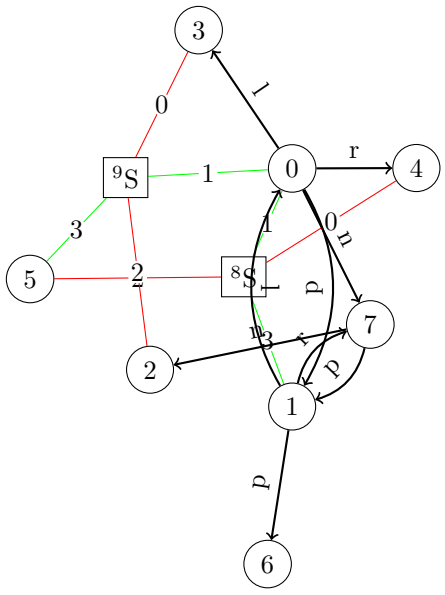
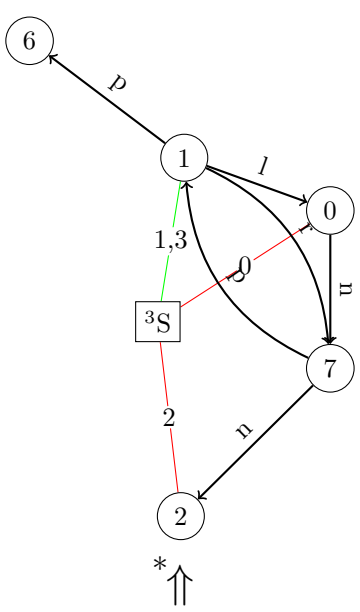


## 1.88 Critical Pair (Not Joinable)




1.8 ⇉ 2 ⇇

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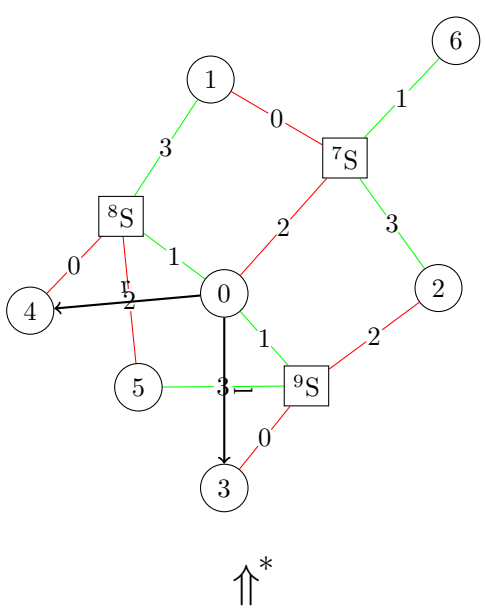


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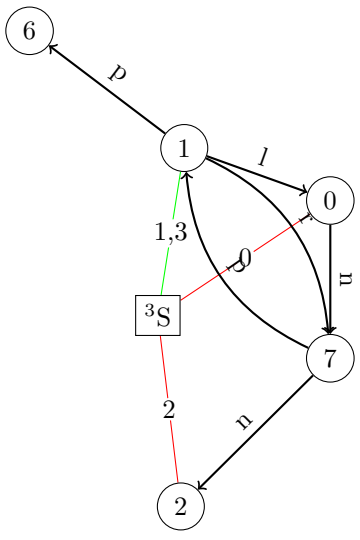


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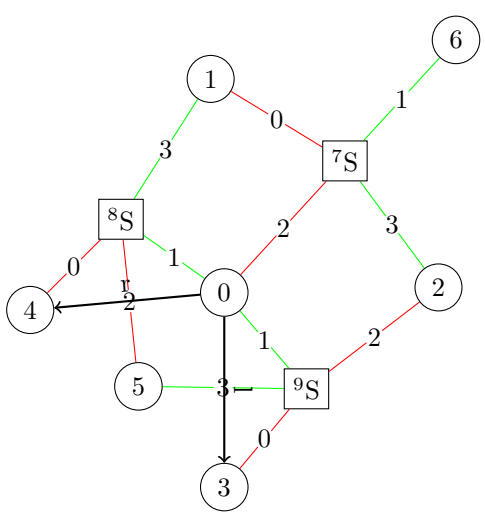
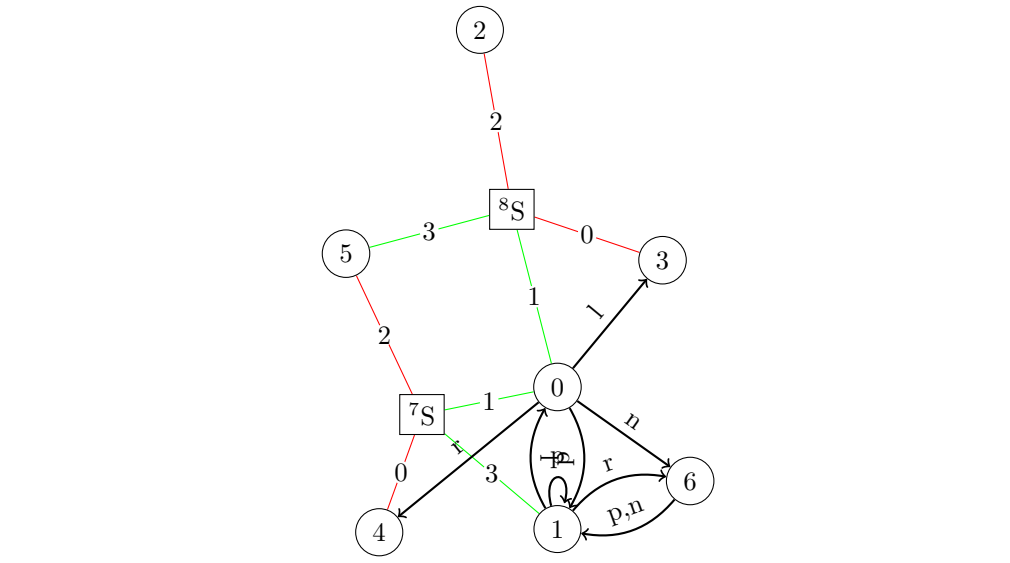
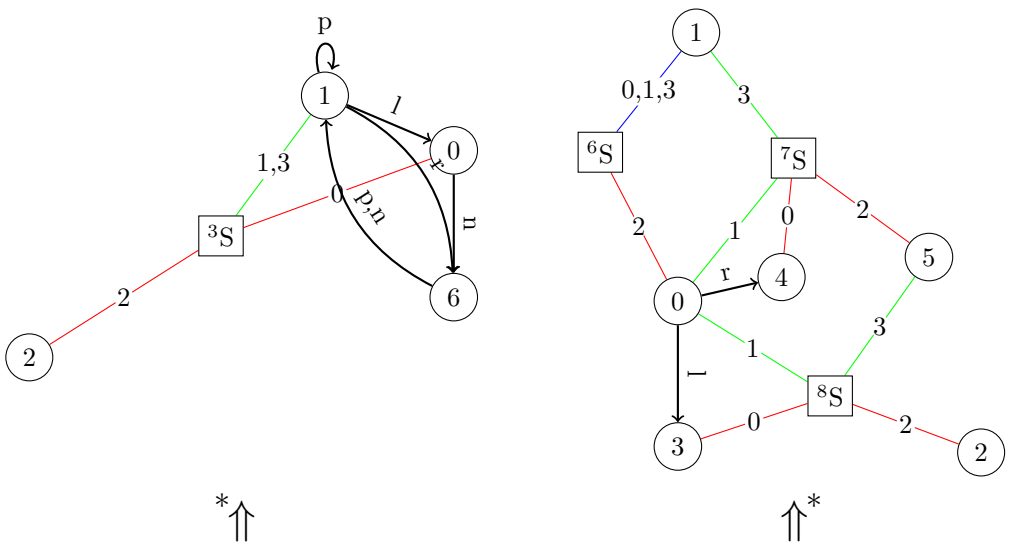
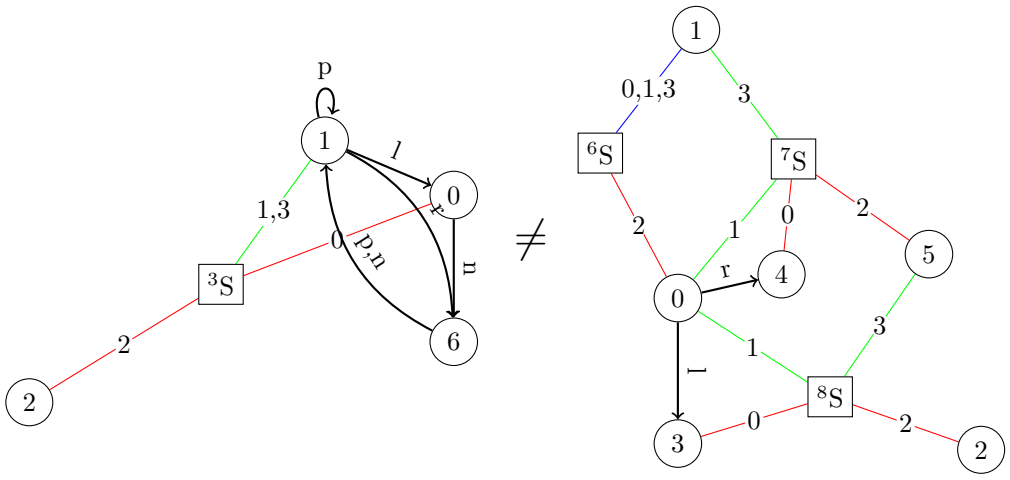


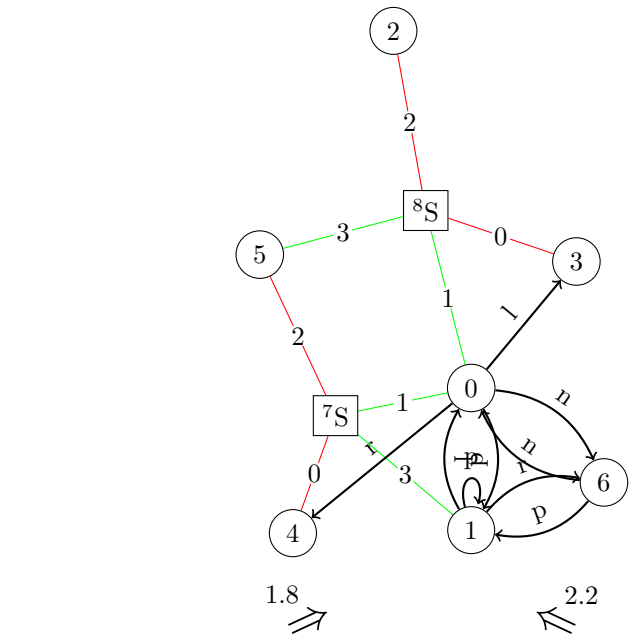
## 1.89 Critical Pair (Not Joinable)

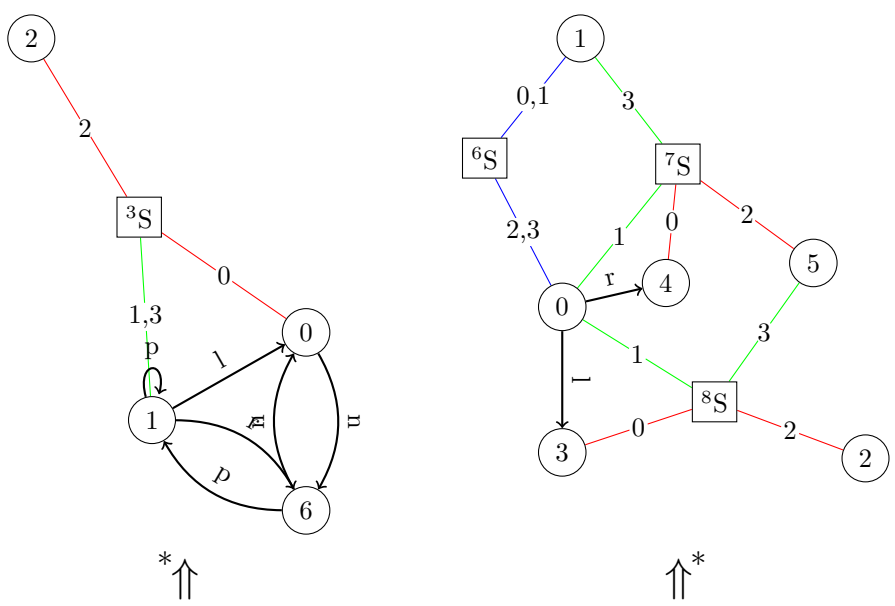


## 1.90 Critical Pair (Not Joinable)

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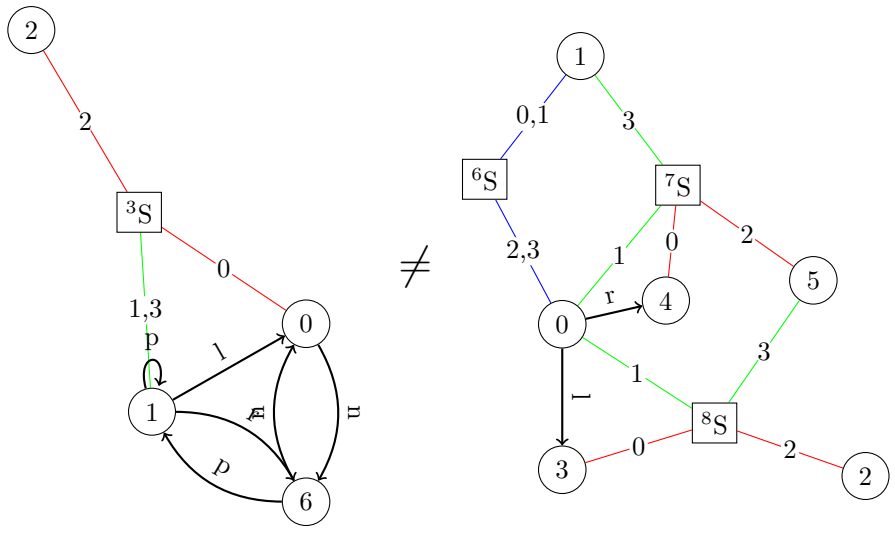
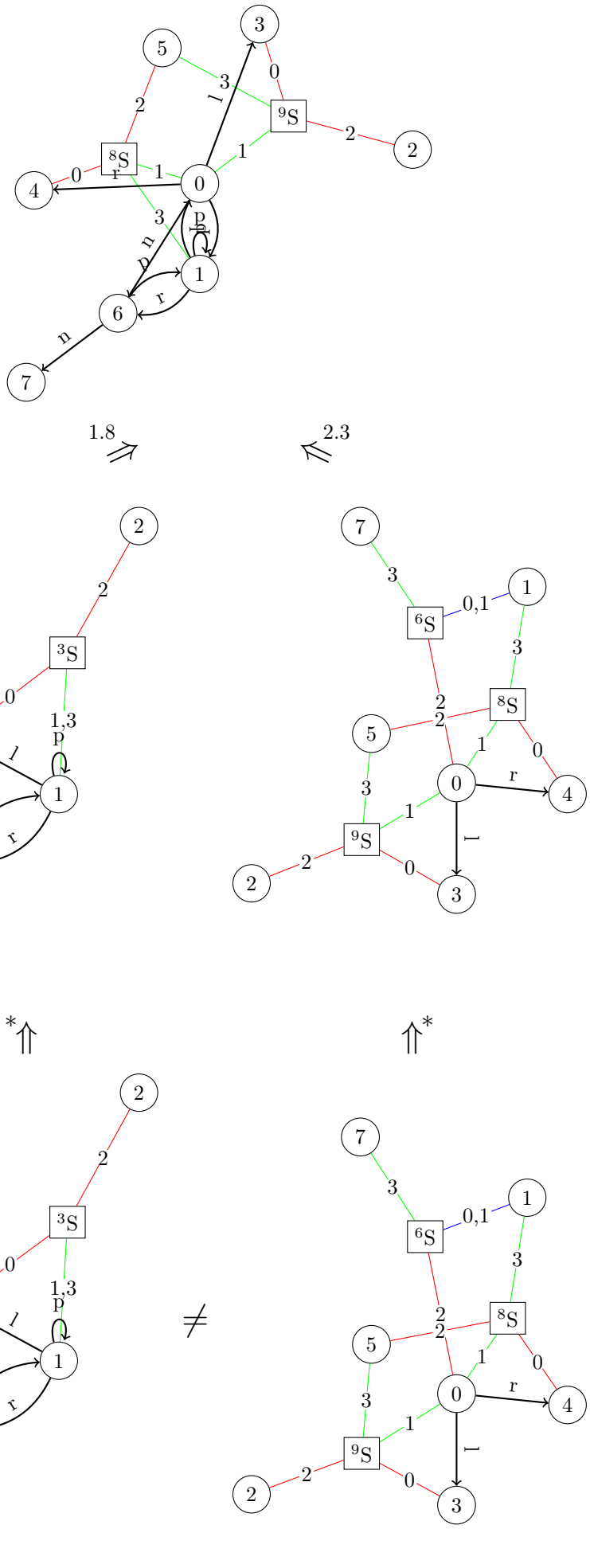
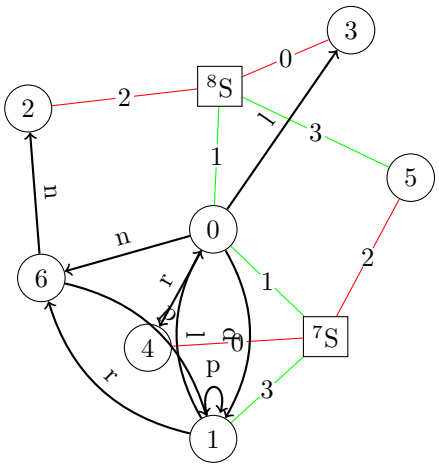


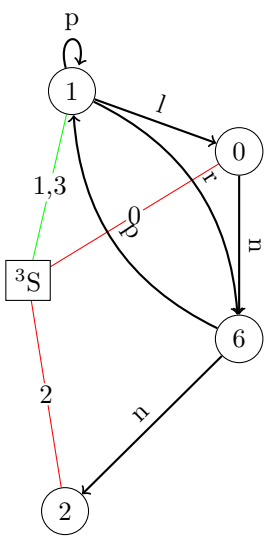
## 1.91 Critical Pair (Not Joinable)

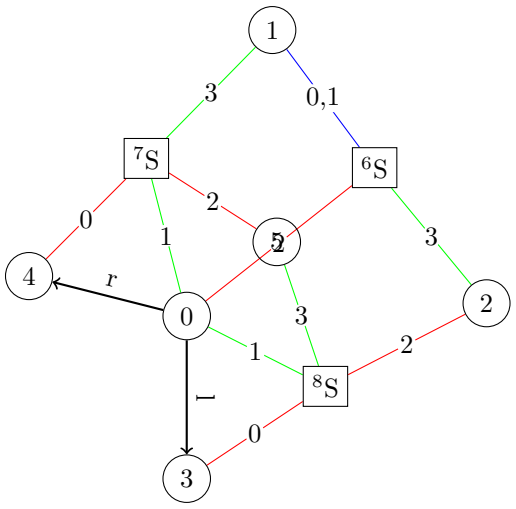


## 1.92 Critical Pair (Not Joinable)




1.8 2.3

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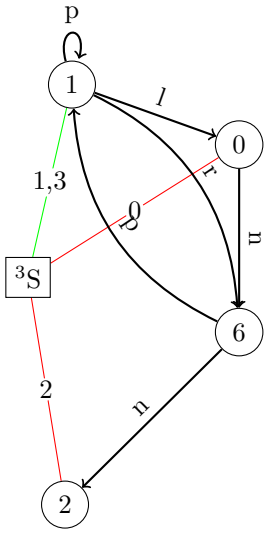


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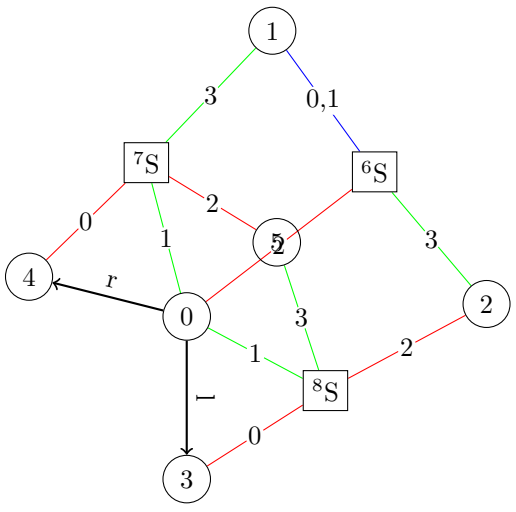
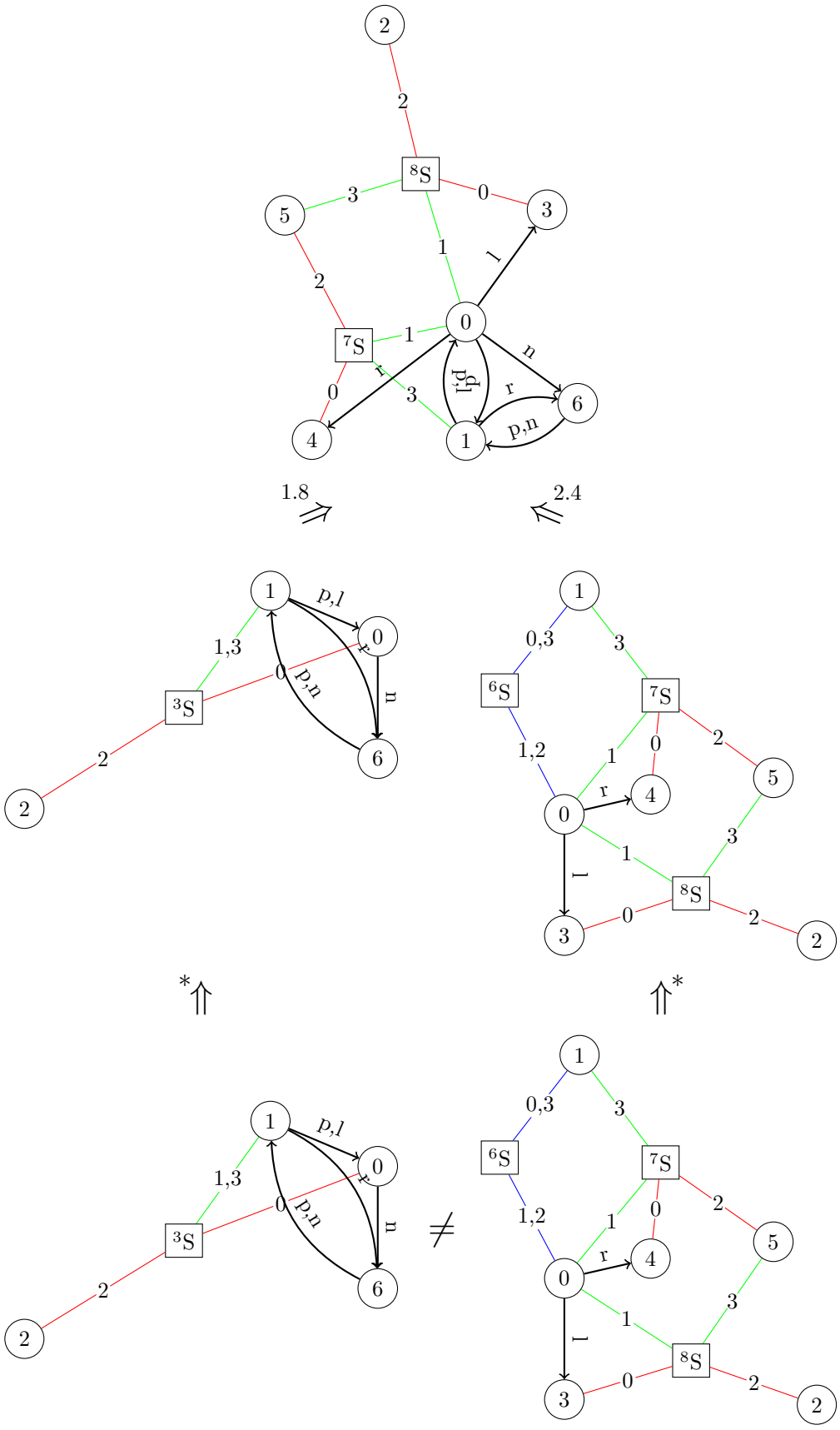


## 1.93 Critical Pair (Not Joinable)

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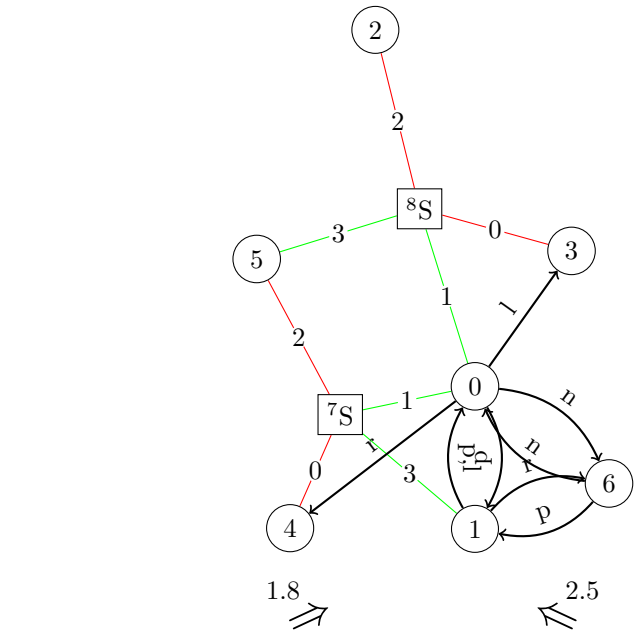
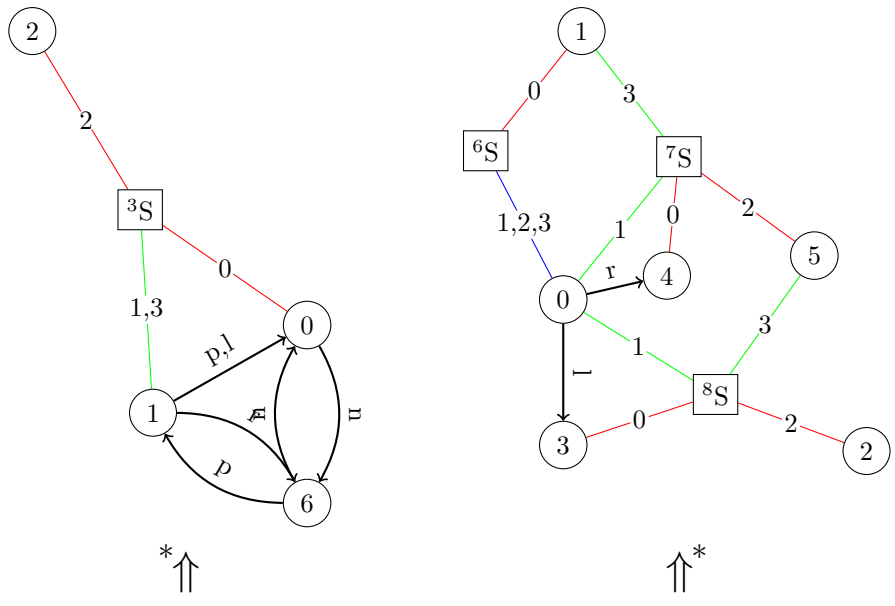
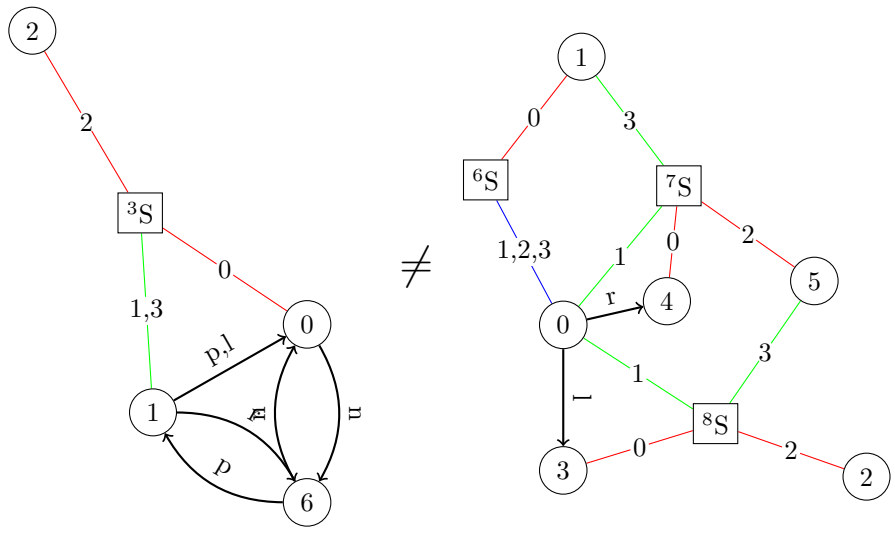
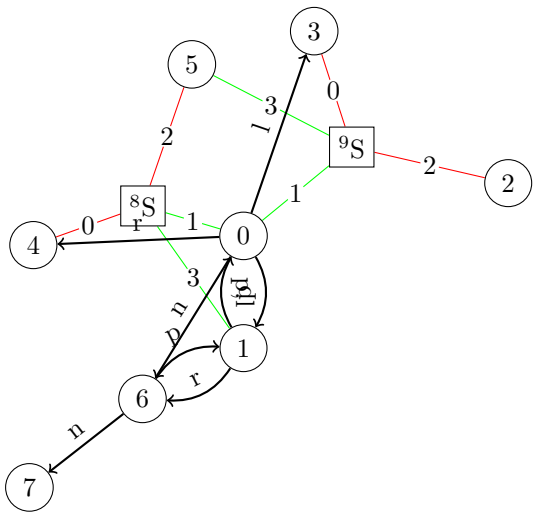
## 1.94 Critical Pair (Not Joinable)



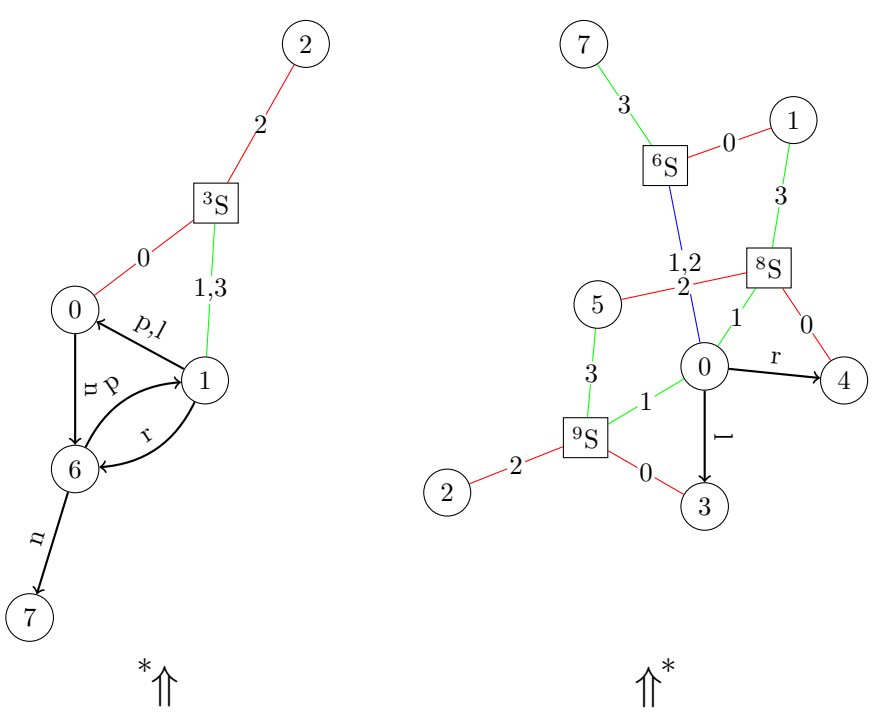



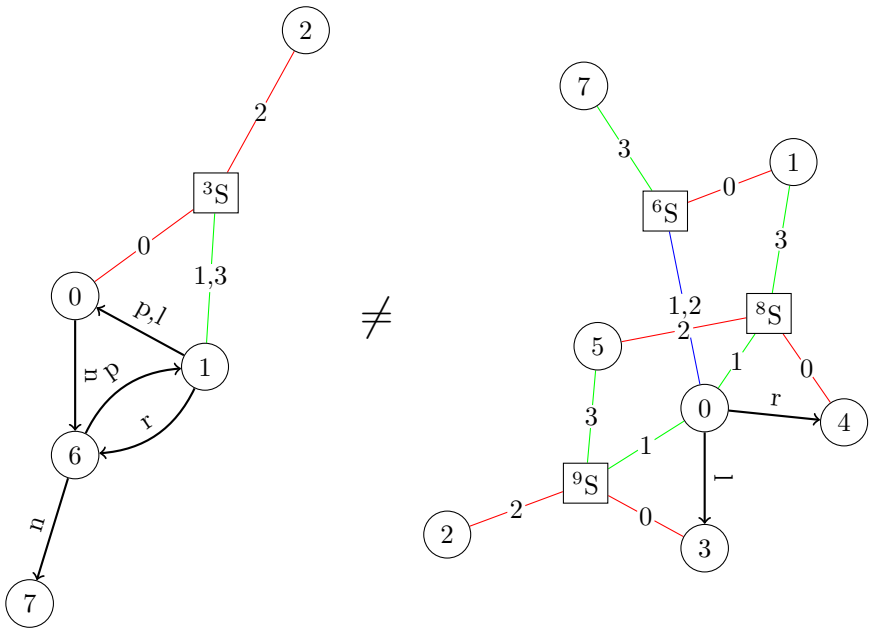
## 1.95 Critical Pair (Not Joinable)



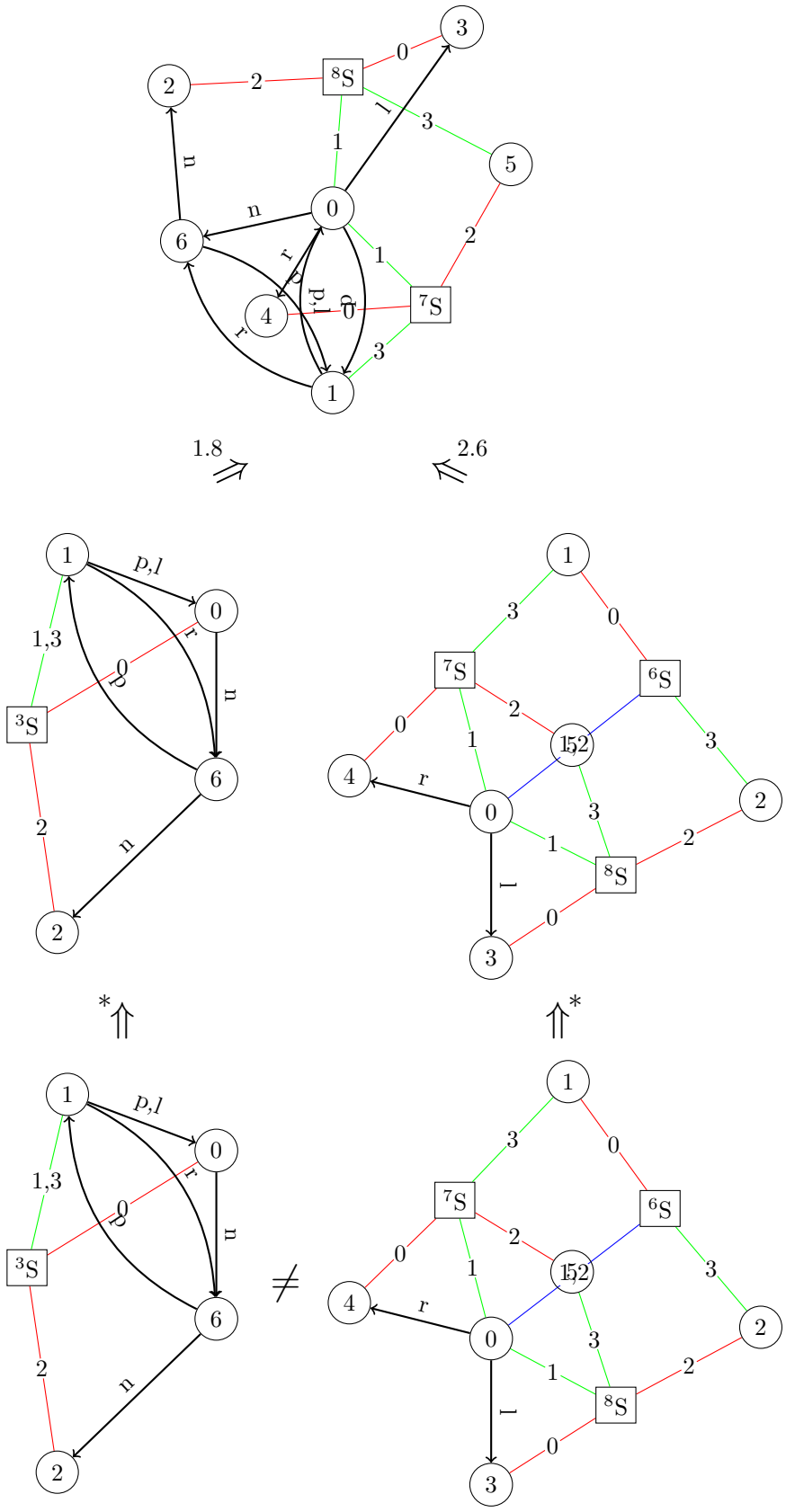

1.8 2.6



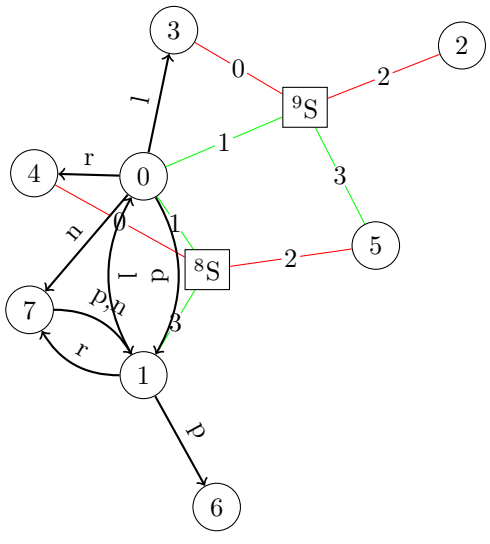

$^{*}\Uparrow$ $\Uparrow^{*}$



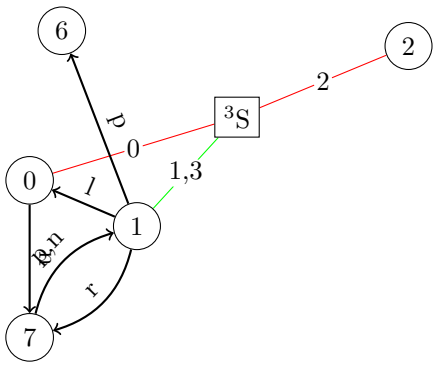
## 1.96 Critical Pair (Not Joinable)



## 1.97 Critical Pair (Not Joinable)




1.8 ⇑ ⇑ 2.7

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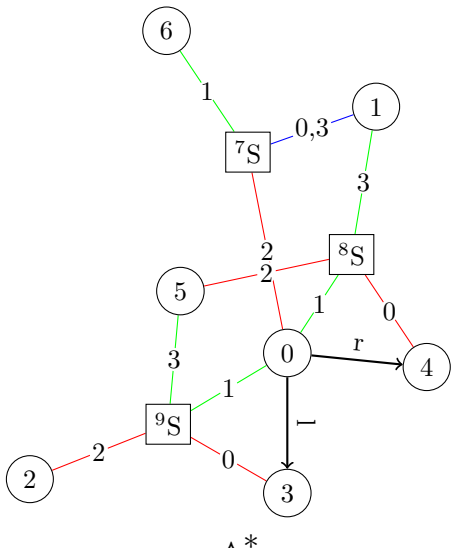


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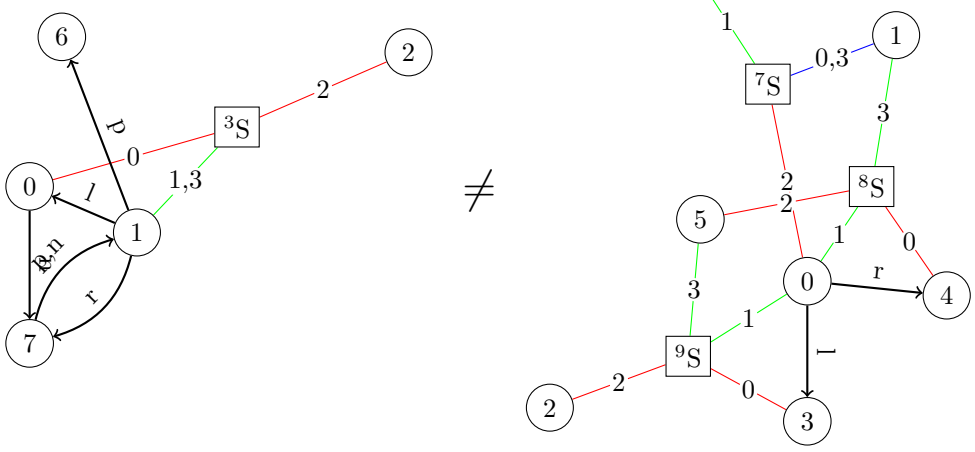
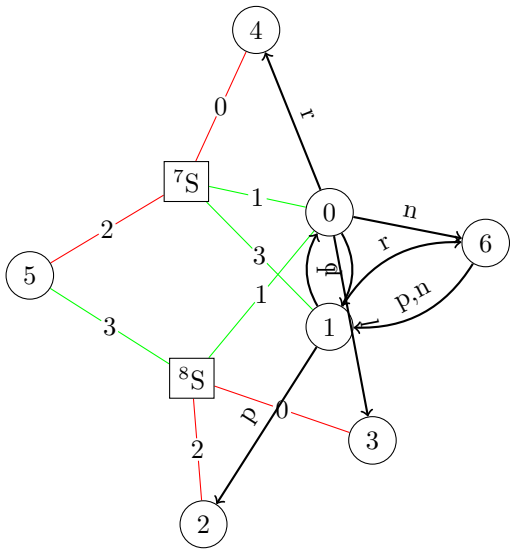
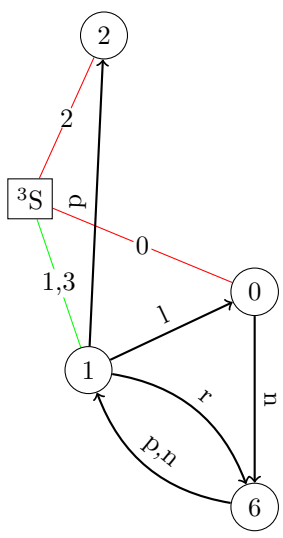


## 1.98 Critical Pair (Not Joinable)




1.8 2.7

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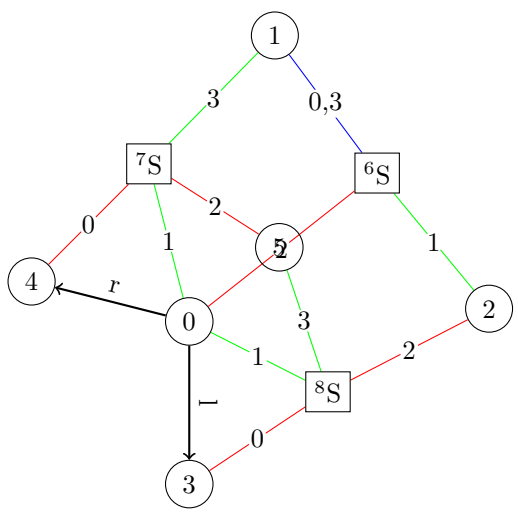


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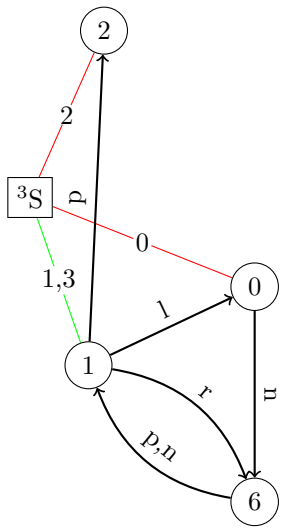


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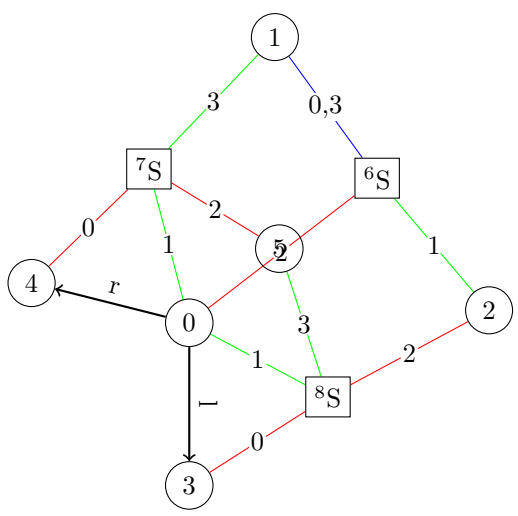
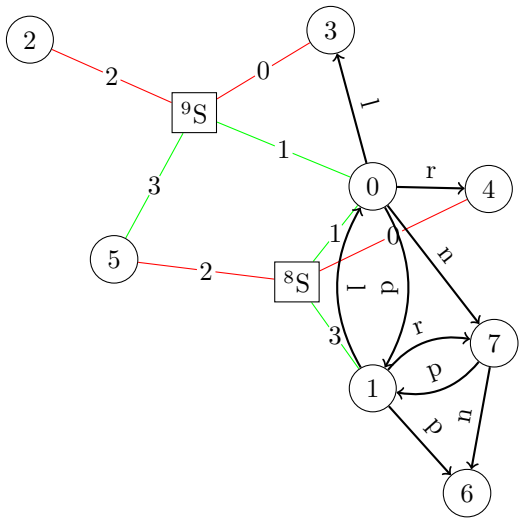
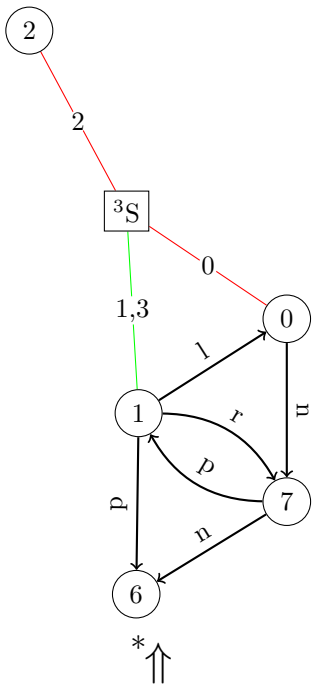


### 1.99 Critical Pair (Not Joinable)




1.8 2.8

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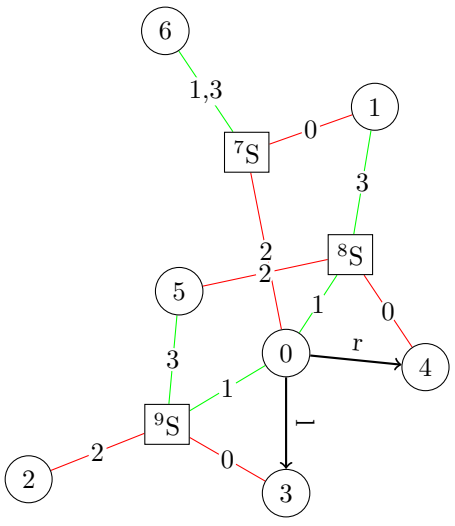


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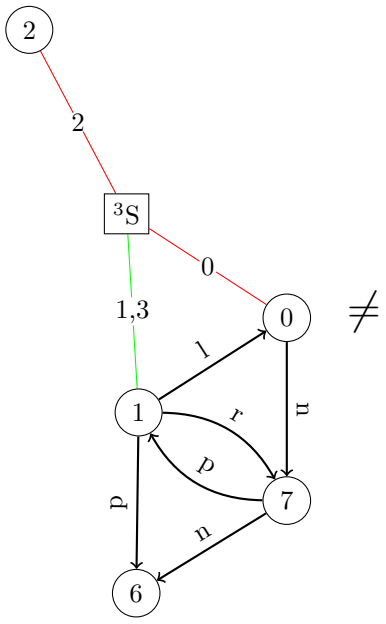


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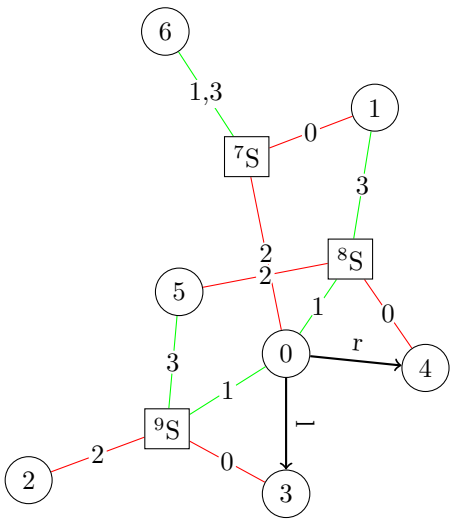
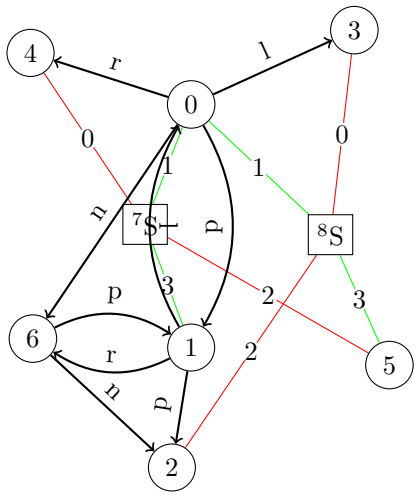
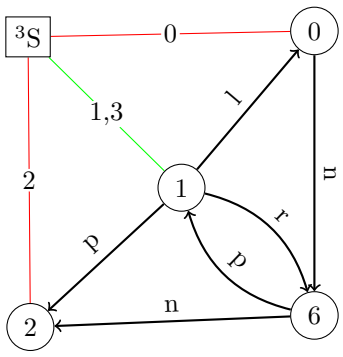
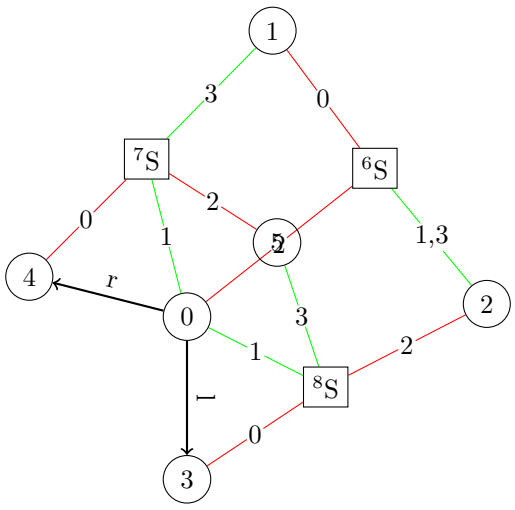


## 1.100 Critical Pair (Not Joinable)




1.8 ⇉ 2.8 ⇇

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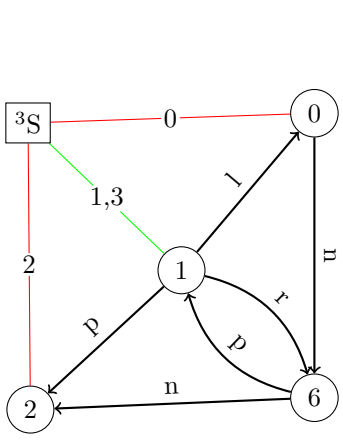


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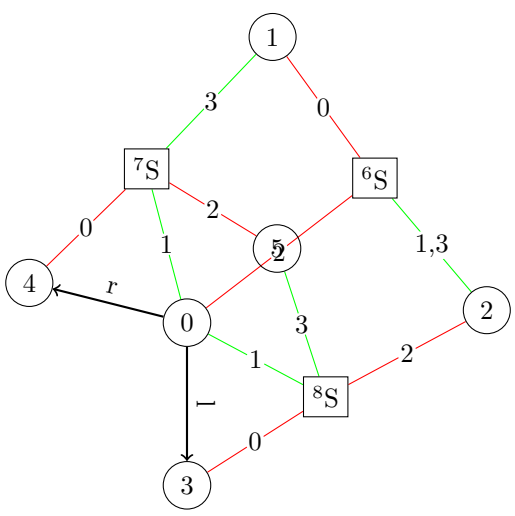
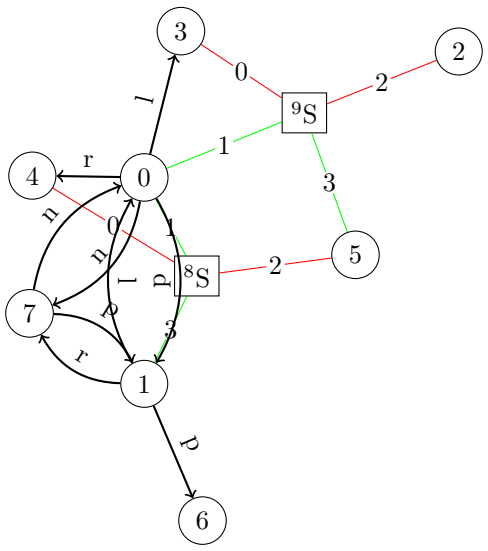
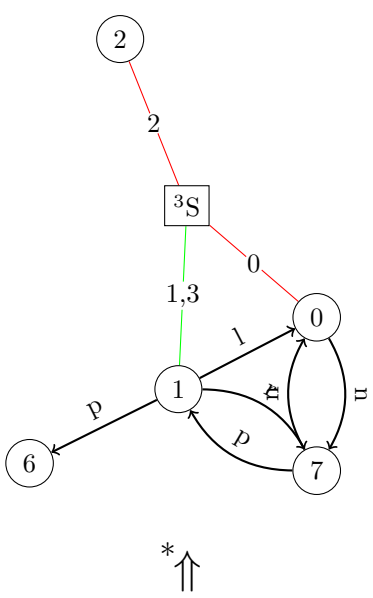


## 1.101 Critical Pair (Not Joinable)




1.8 ⇛ 2.9 ⇚

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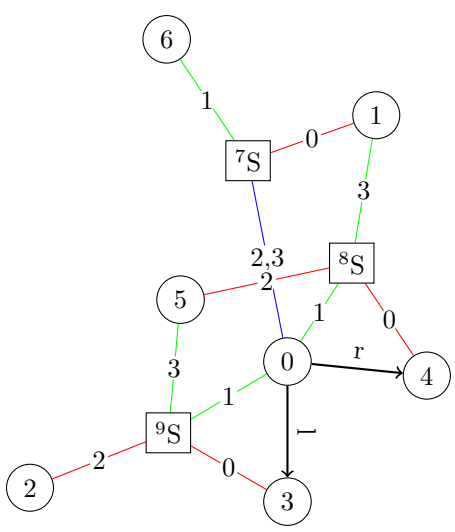


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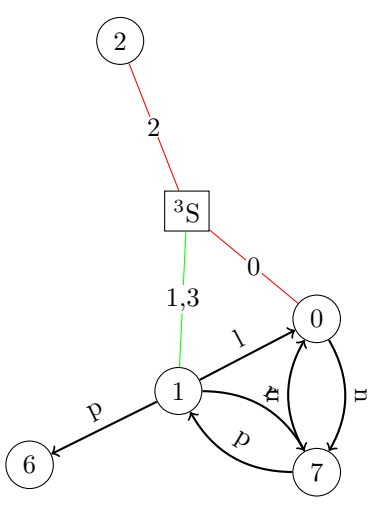
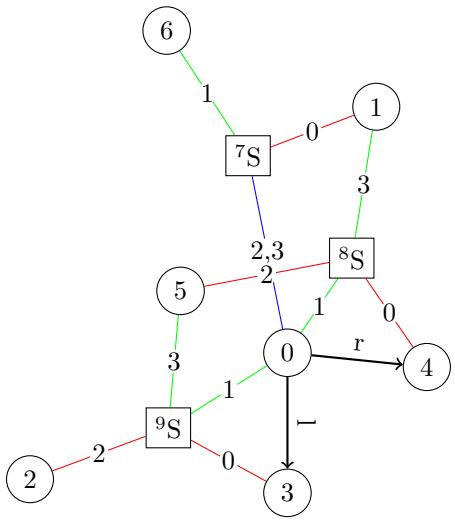
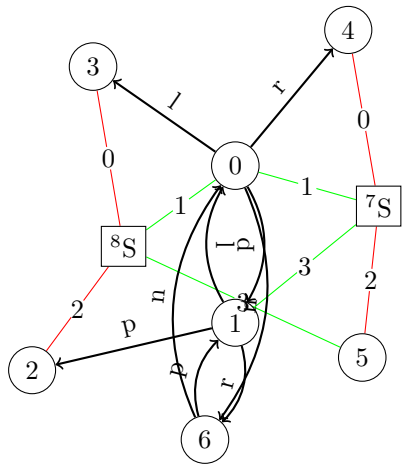
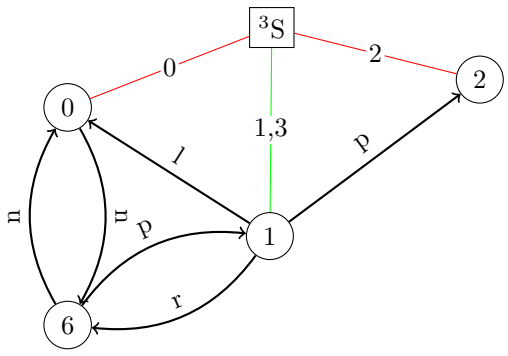


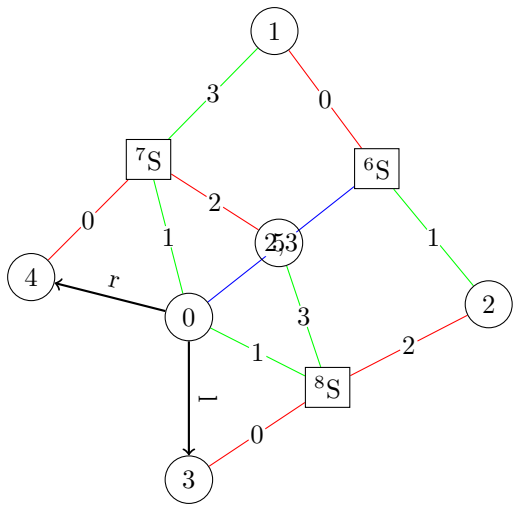



## 1.102 Critical Pair (Not Joinable)




1.8 ⇉ 2.9 ⇇

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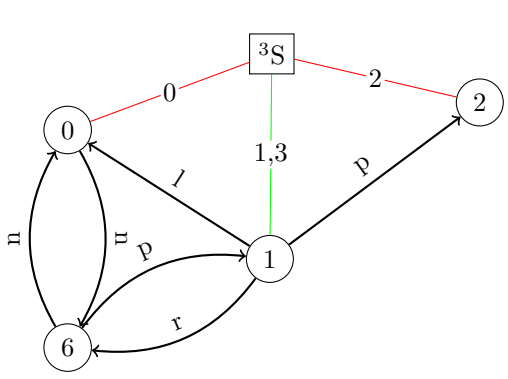


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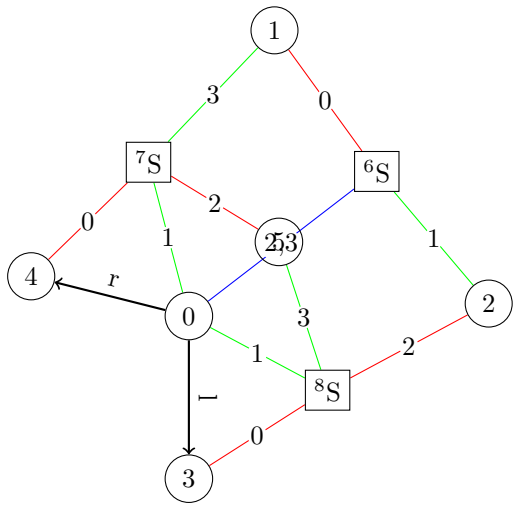
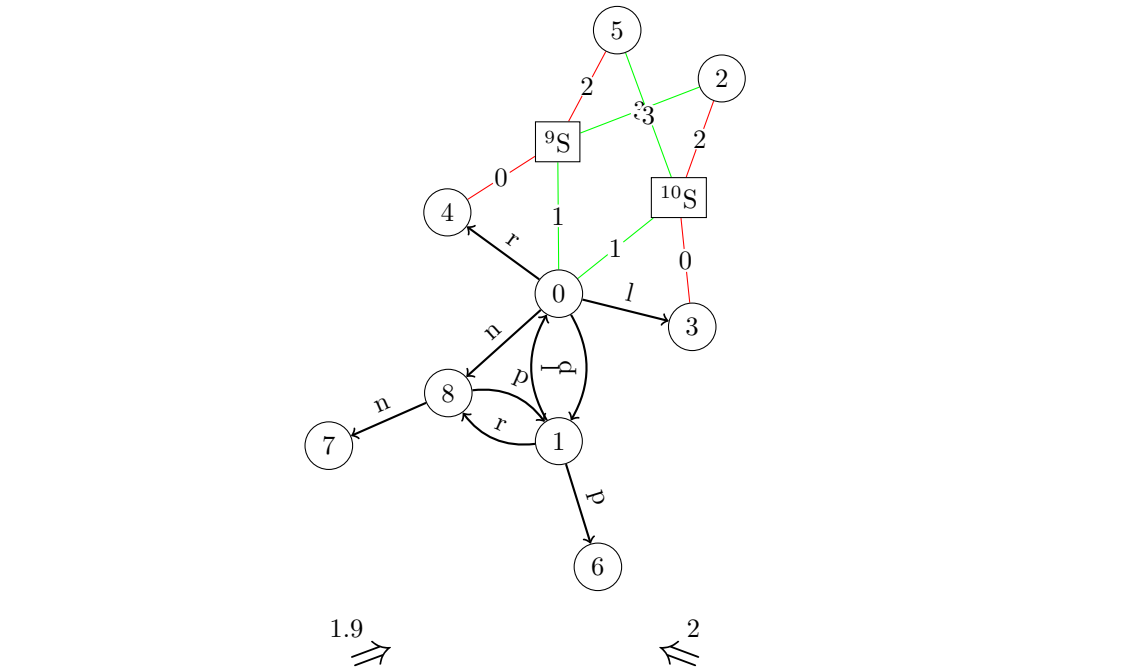
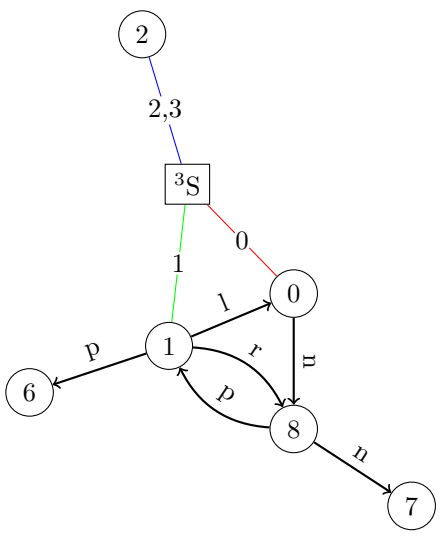


## 1.103 Critical Pair (Not Joinable)




1.9 2

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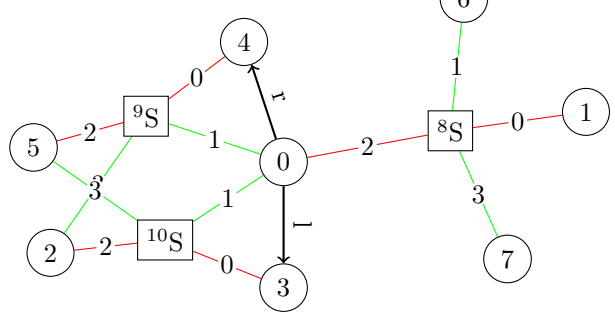


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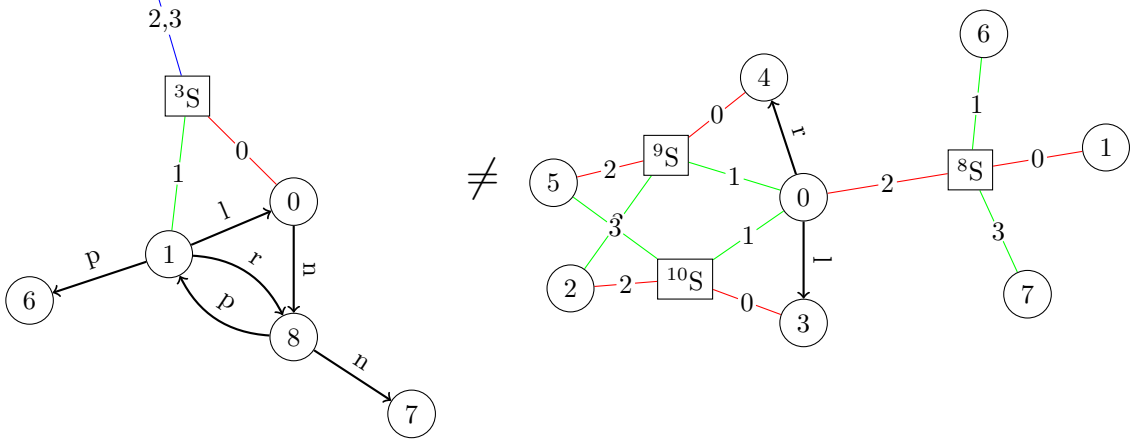
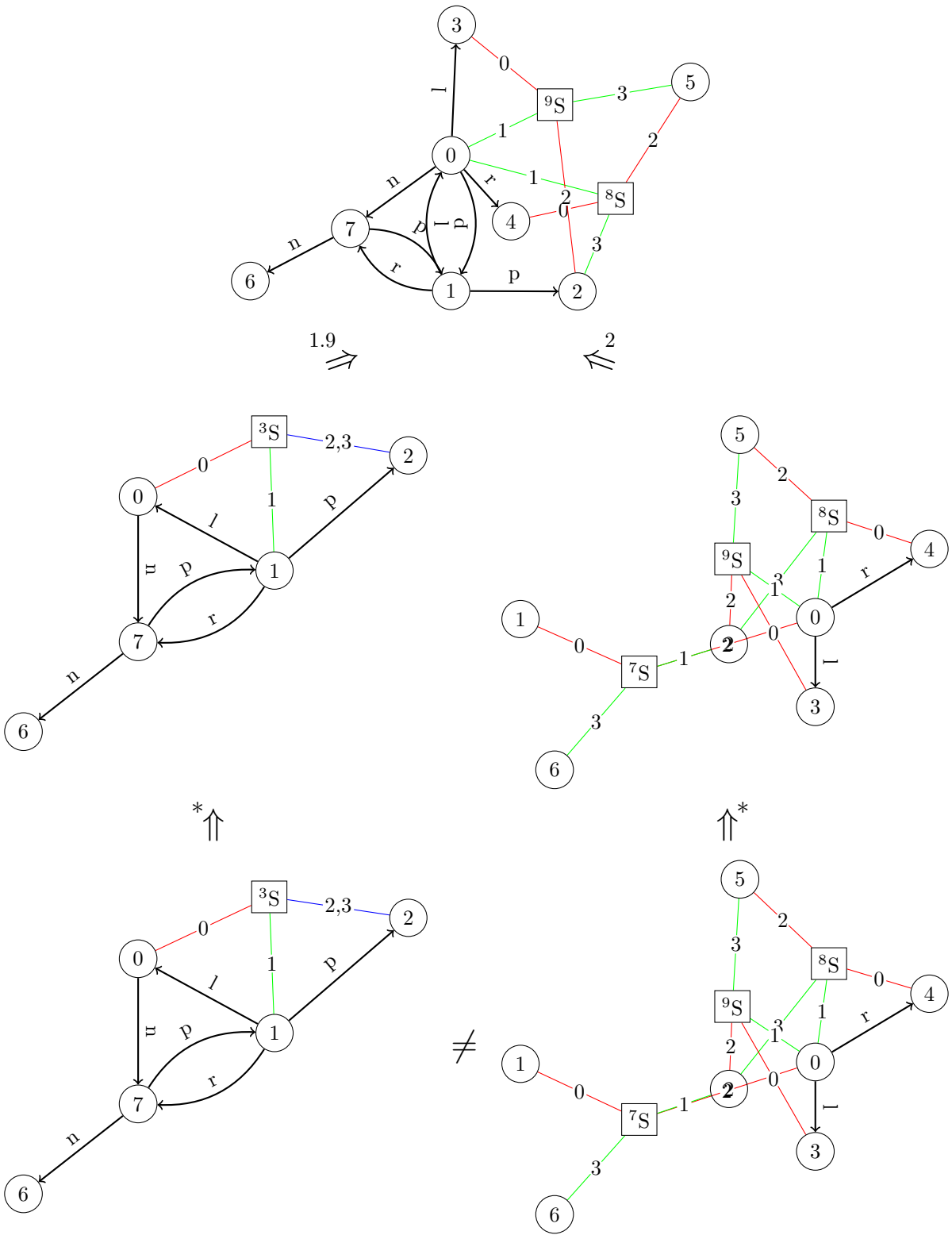
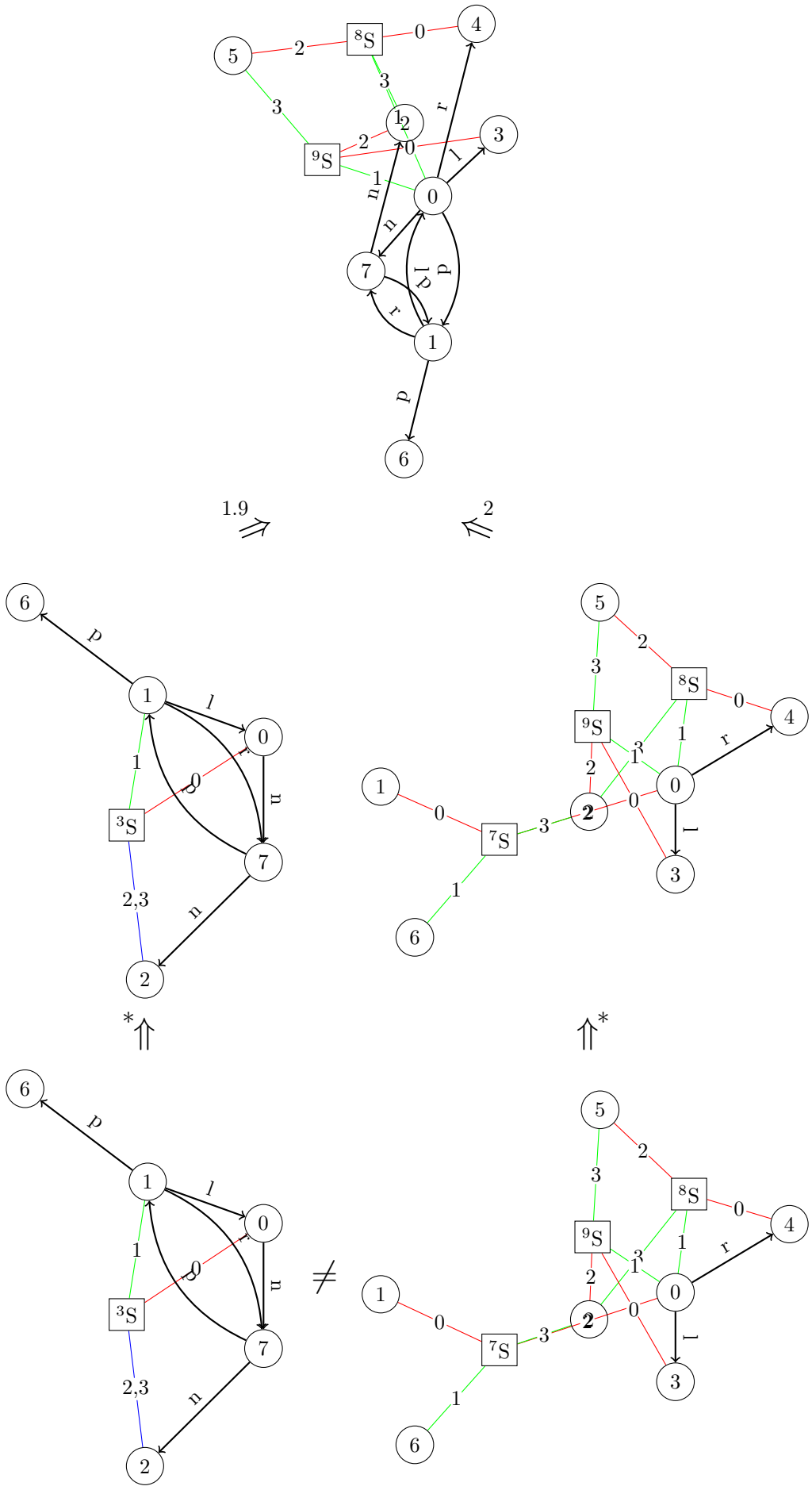


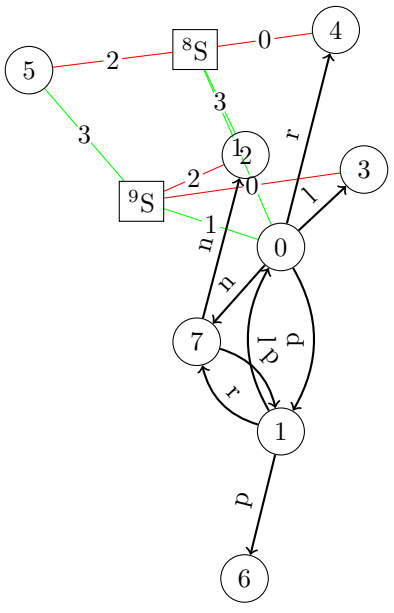
### 1.104 Critical Pair (Not Joinable)



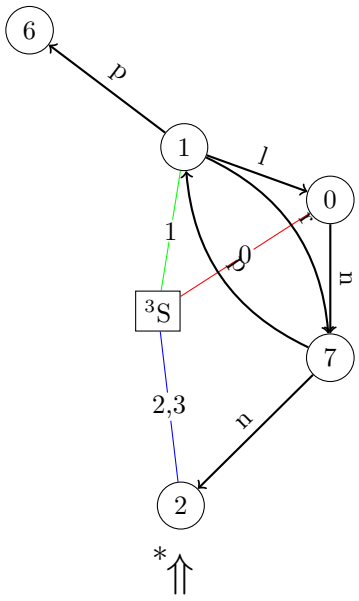
### 1.105 Critical Pair (Not Joinable)

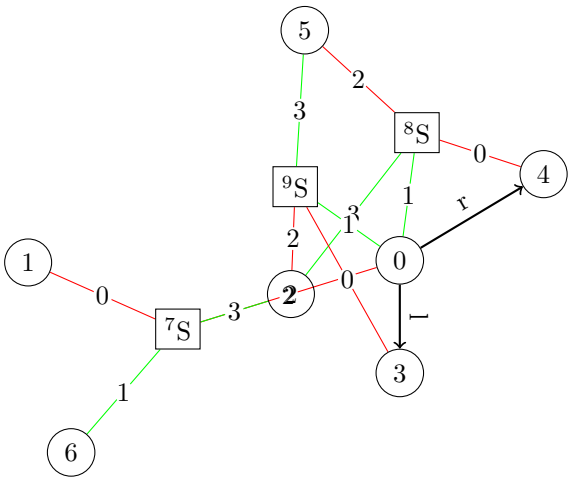


## 1.106 Critical Pair (Not Joinable)

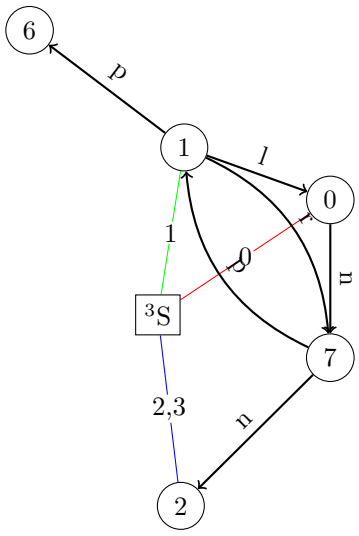


$\overset{1.9}{\Rightarrow}$ $\overset{2}{\Leftarrow}$





$\overset{*}{\Uparrow}$ $\overset{*}{\Uparrow}$



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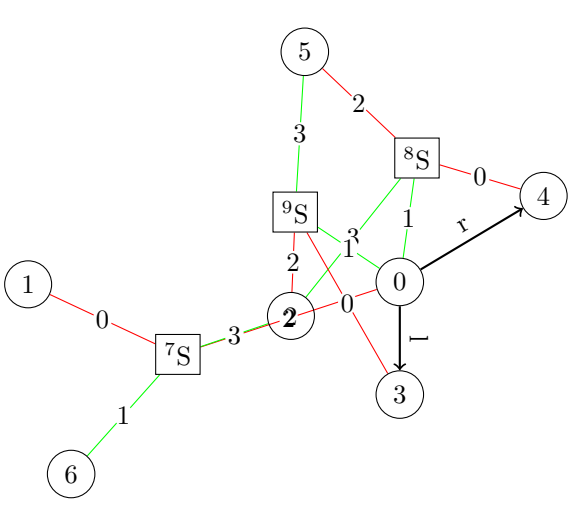
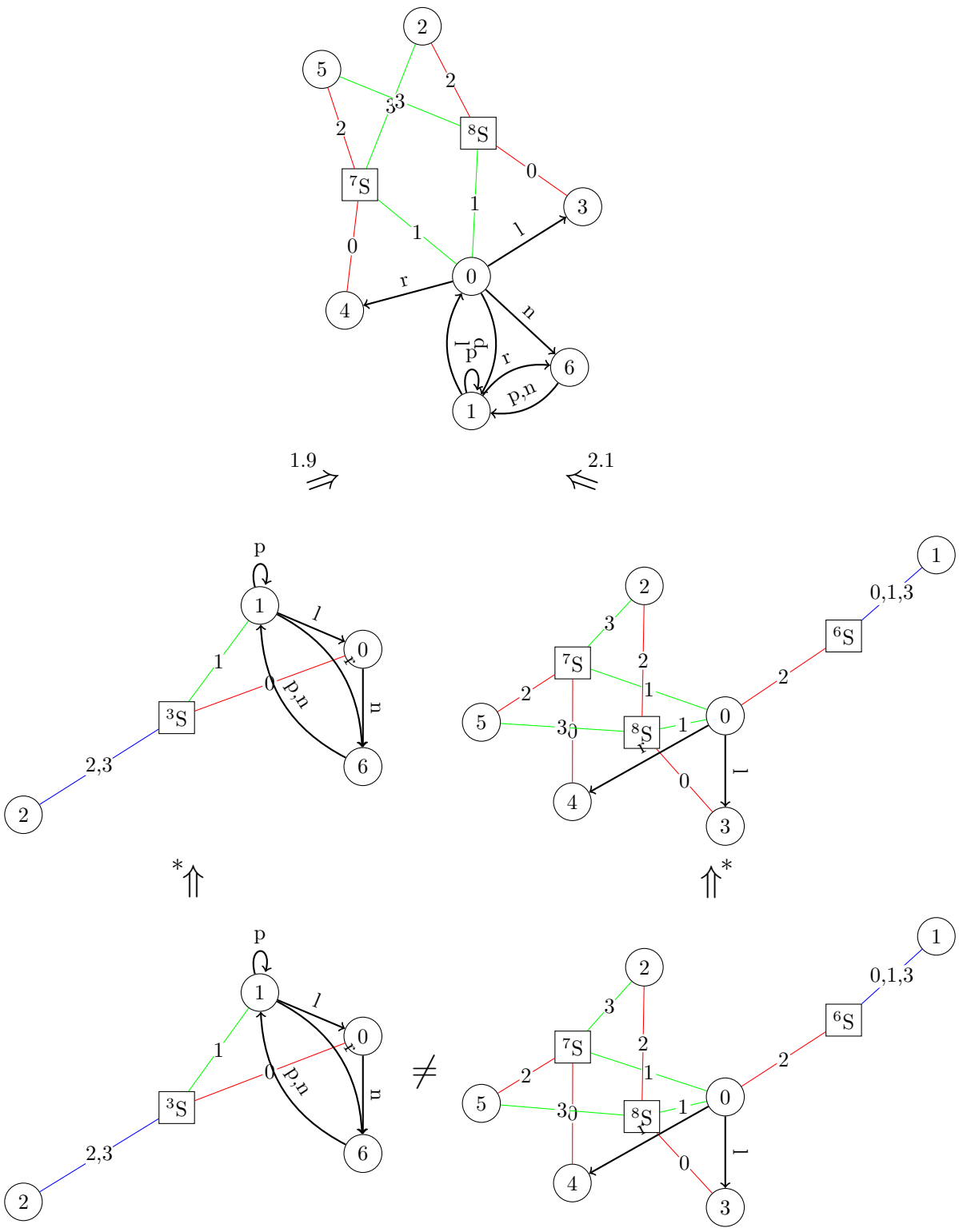
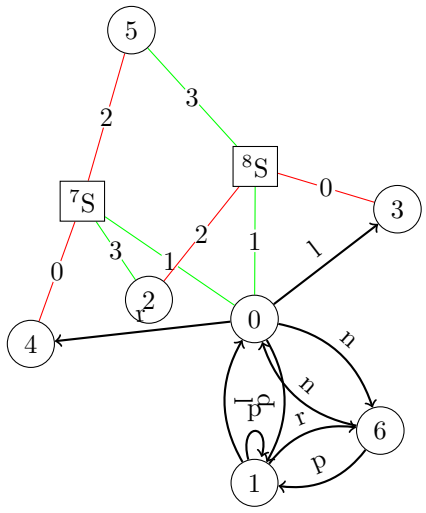


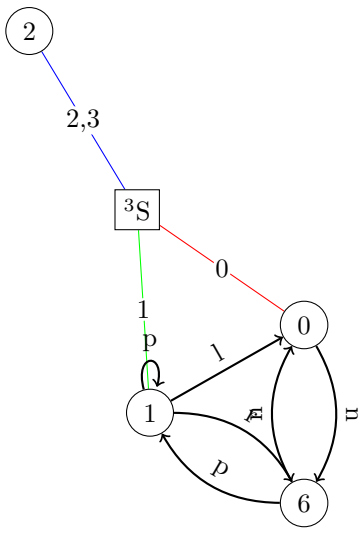
### 1.107 Critical Pair (Not Joinable)

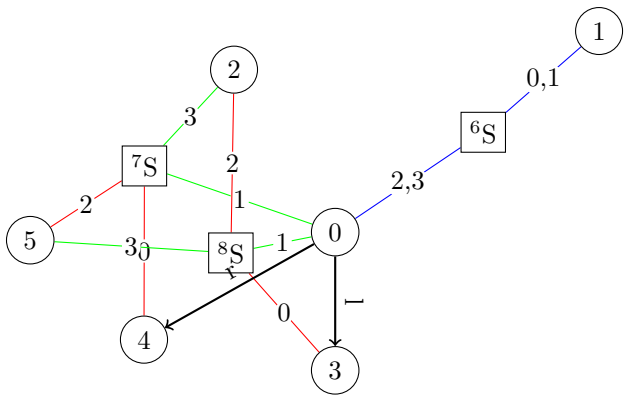


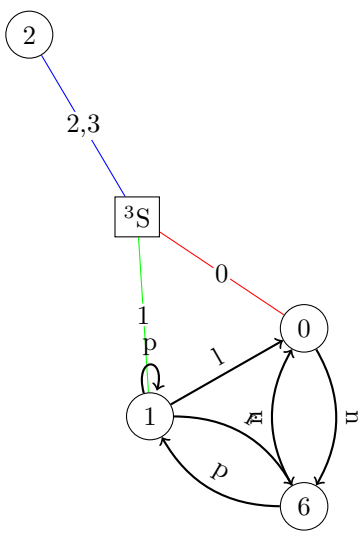
## 1.108 Critical Pair (Not Joinable)




1.9 2.2

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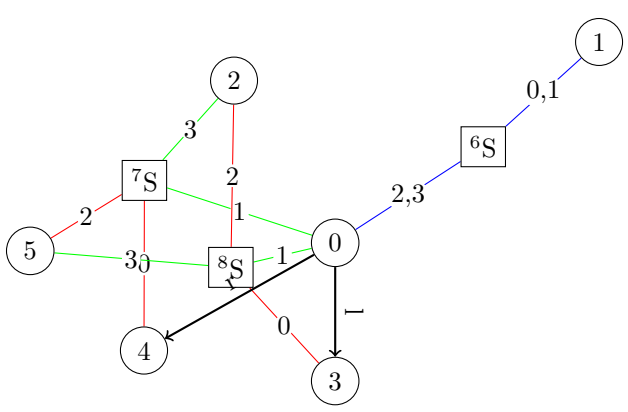
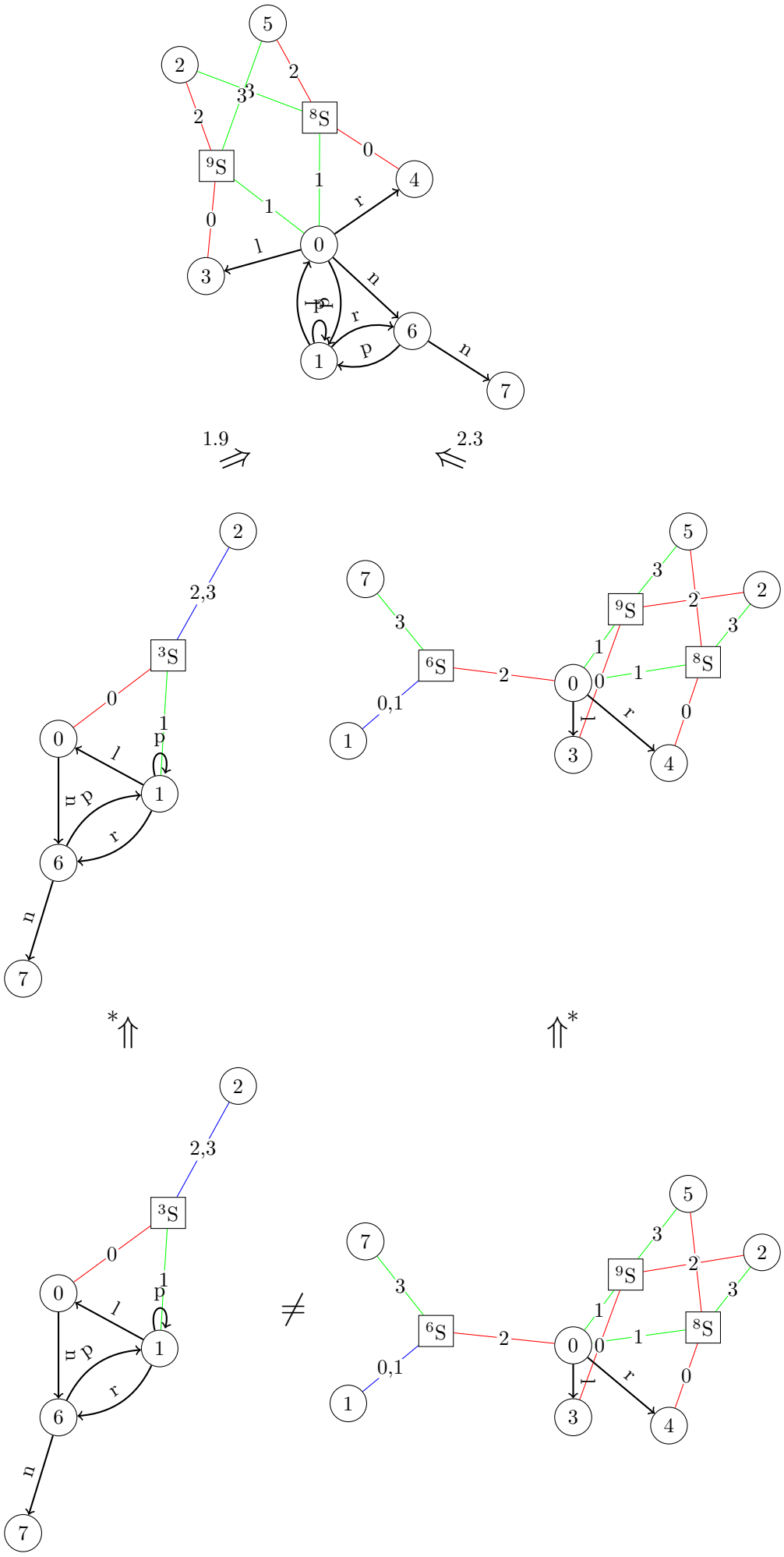
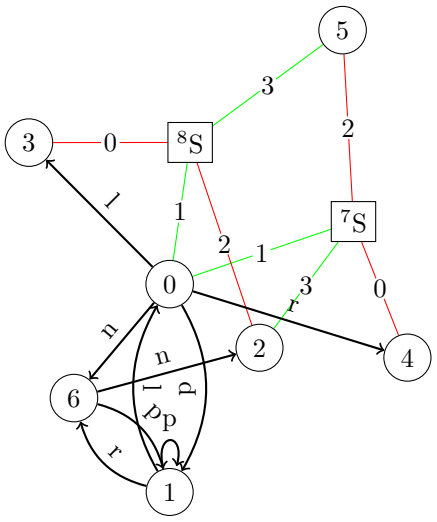


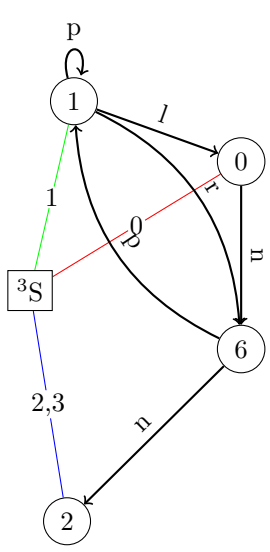
## 1.109 Critical Pair (Not Joinable)

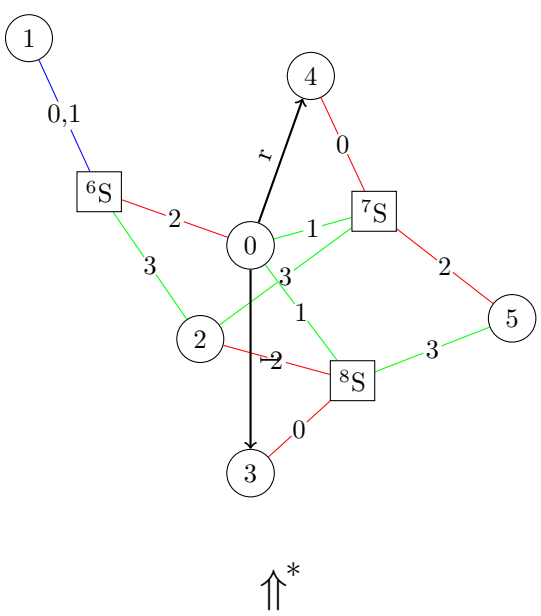


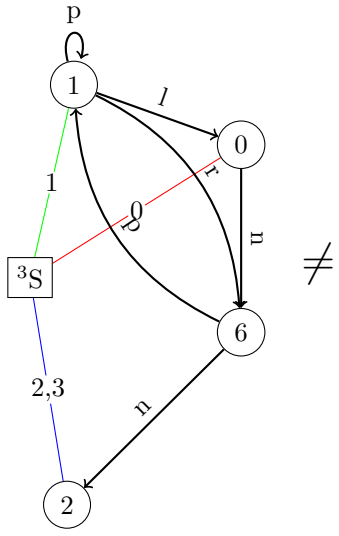
## 1.110 Critical Pair (Not Joinable)




1.9 2.3

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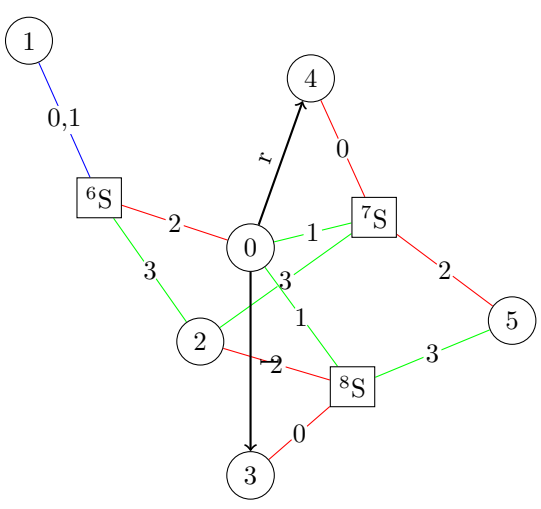
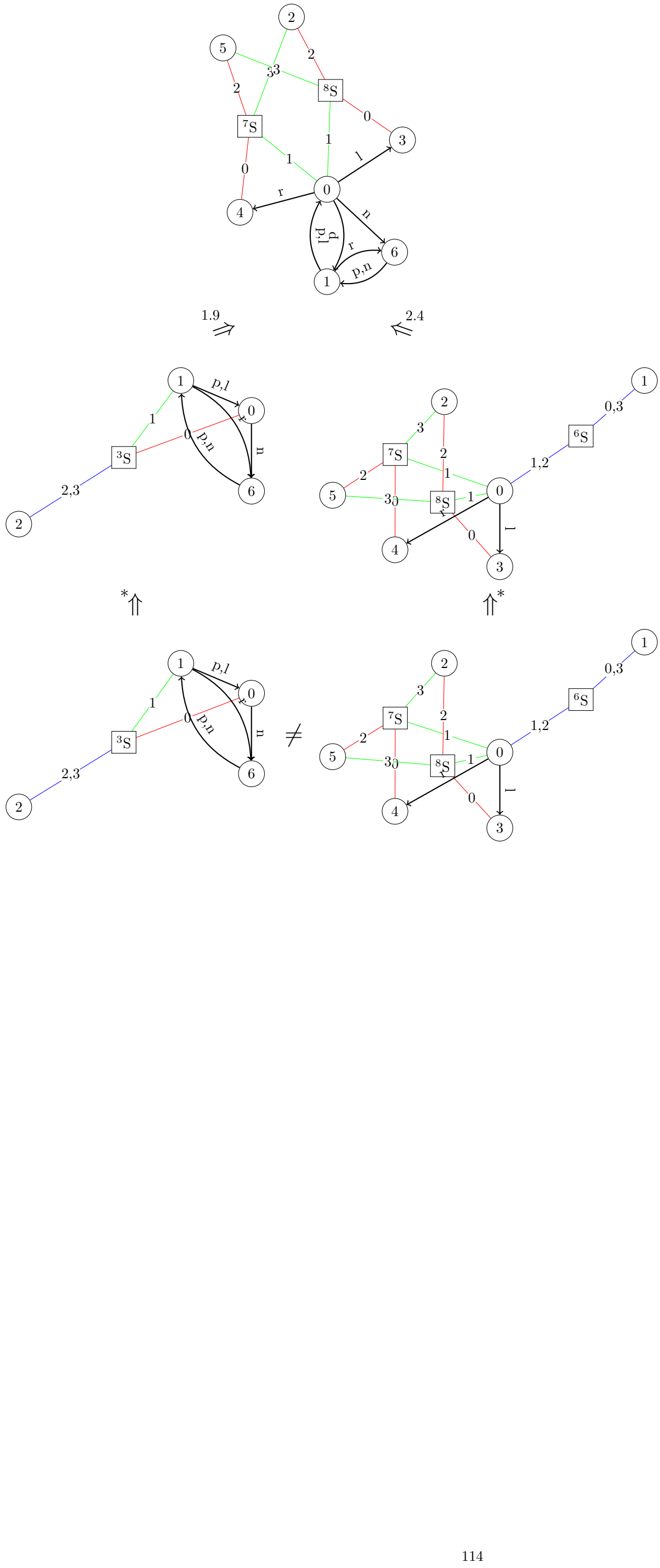
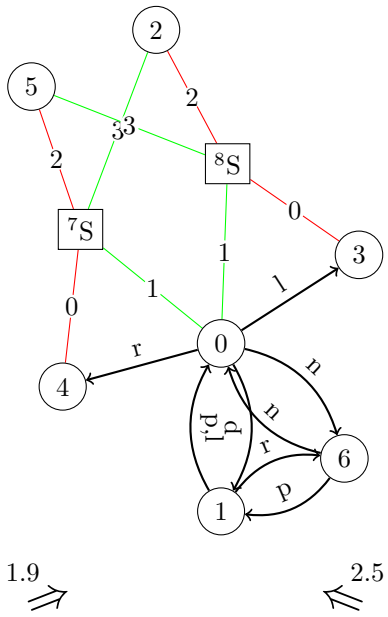


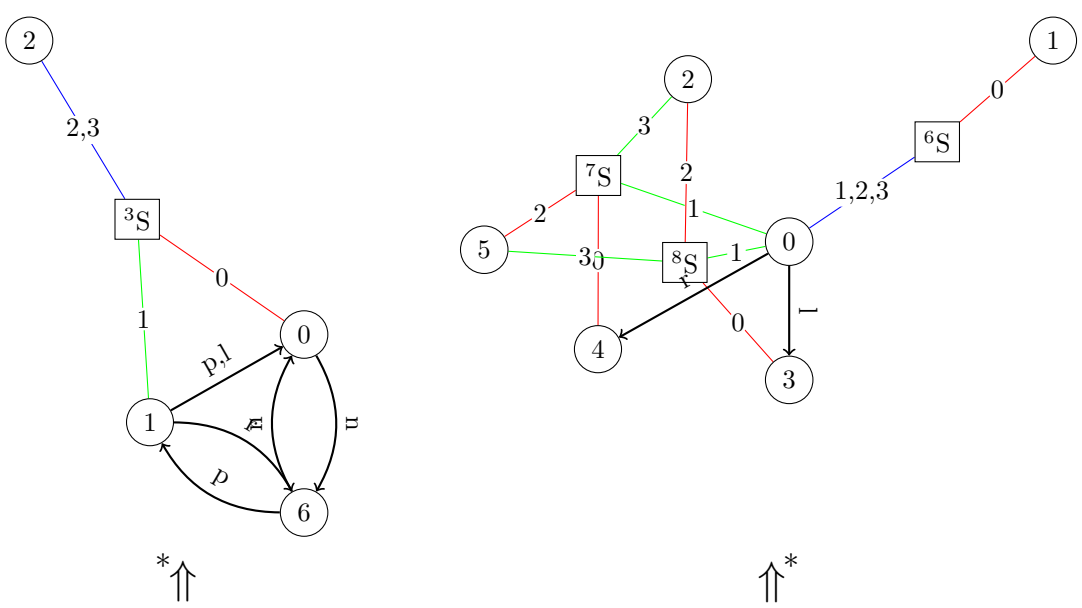
### 1.111 Critical Pair (Not Joinable)

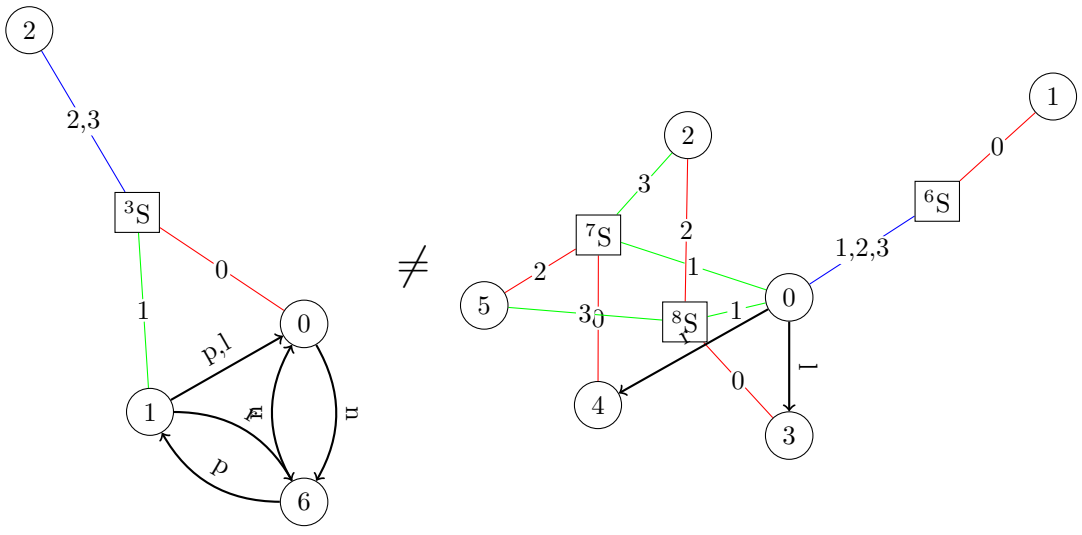


## 1.112 Critical Pair (Not Joinable)

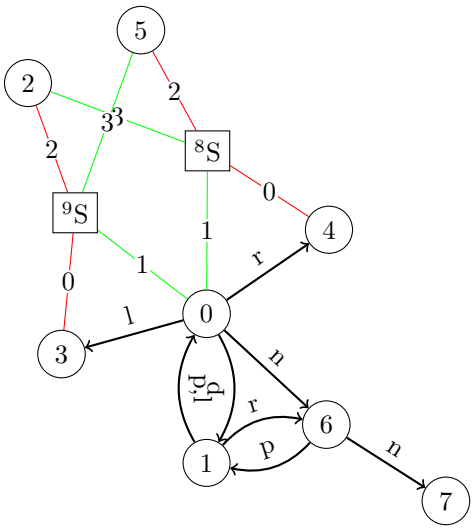



1.9 2.5

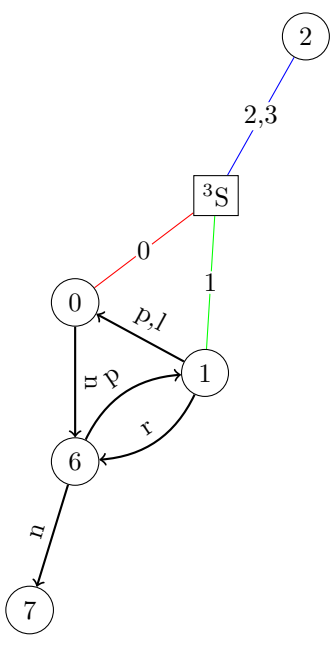


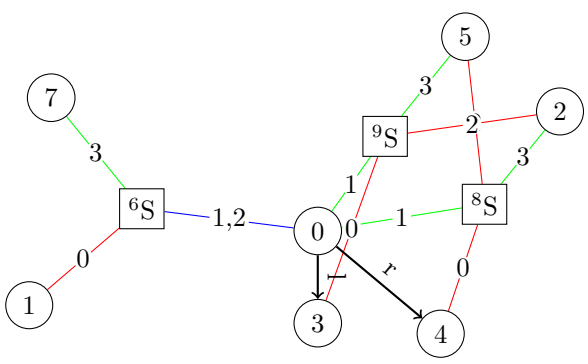



### 1.113 Critical Pair (Not Joinable)




1.9 2.6

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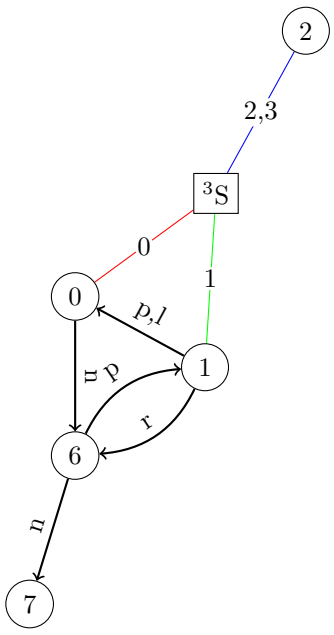


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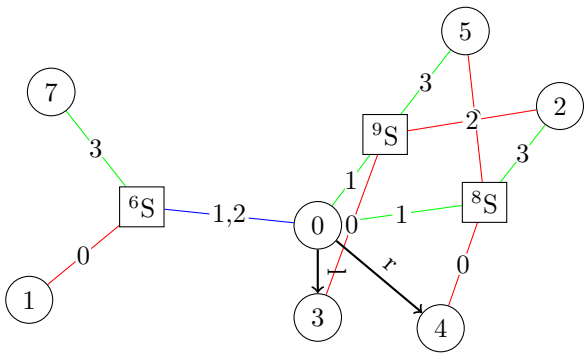
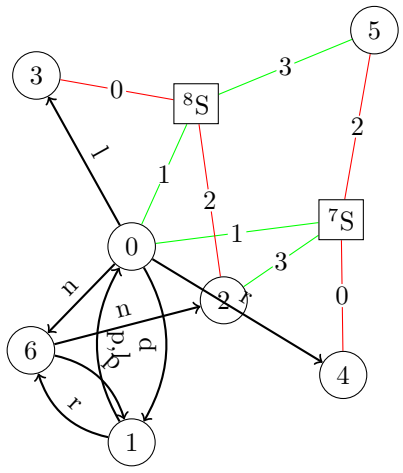
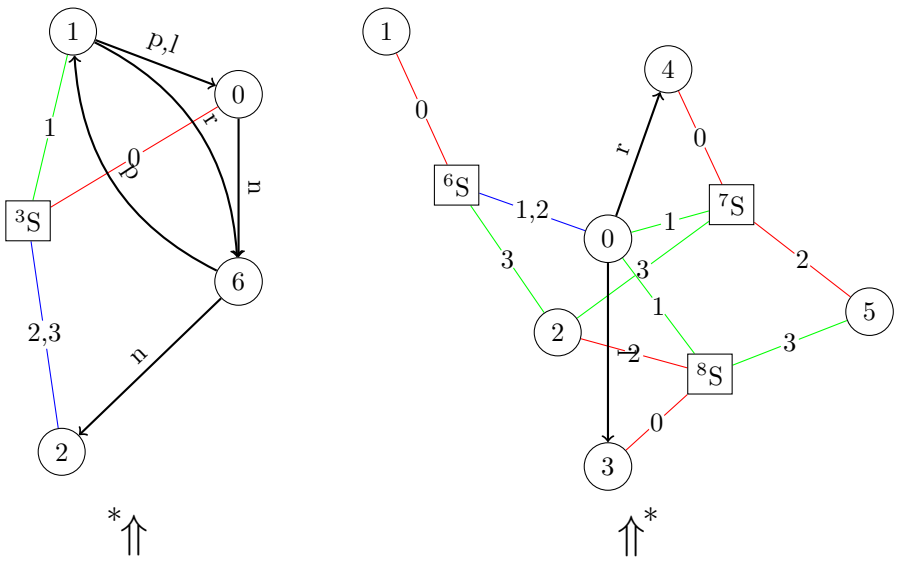


## 1.114 Critical Pair (Not Joinable)




1.9 ⇉ 2.6 ⇇

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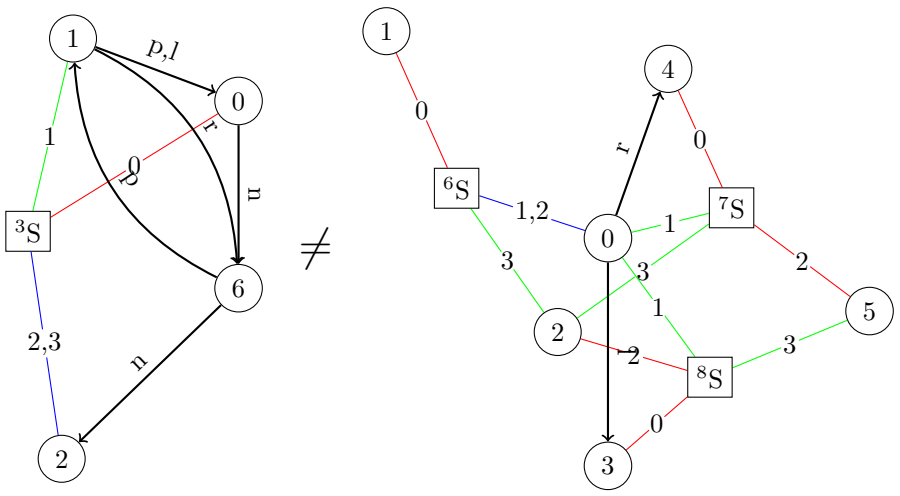
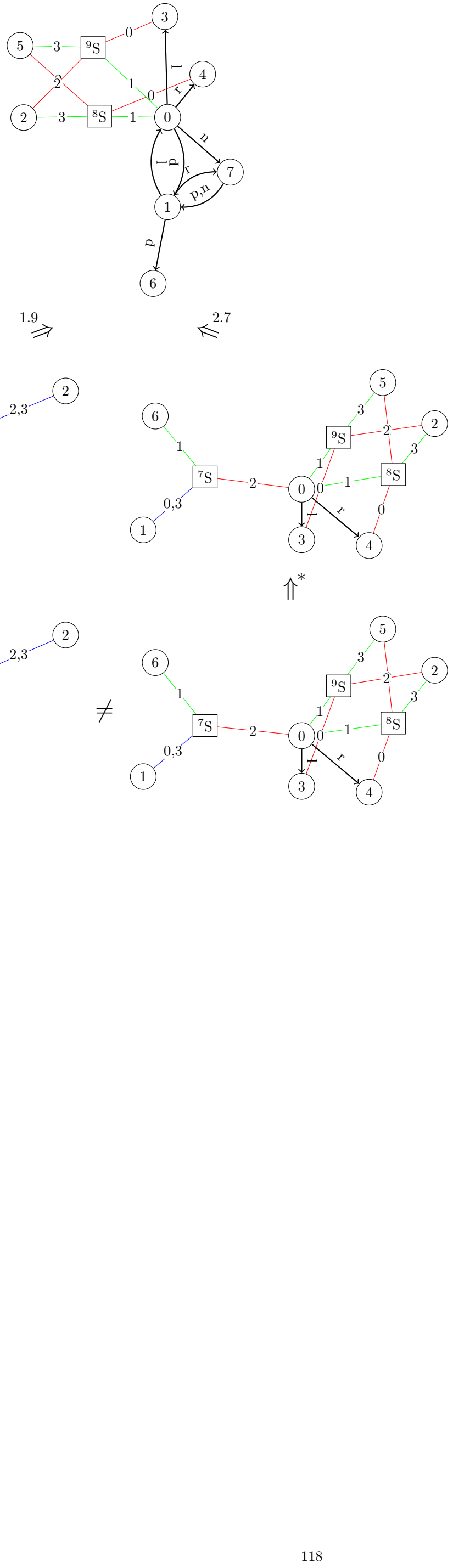
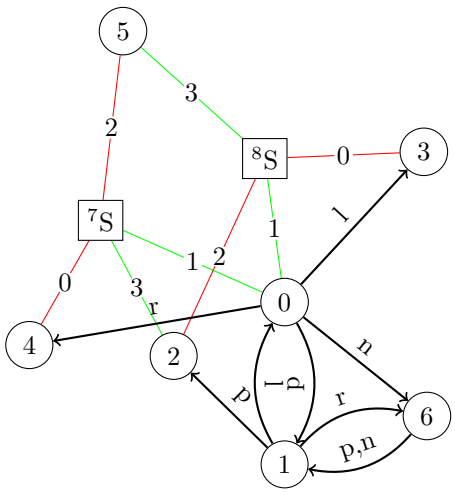


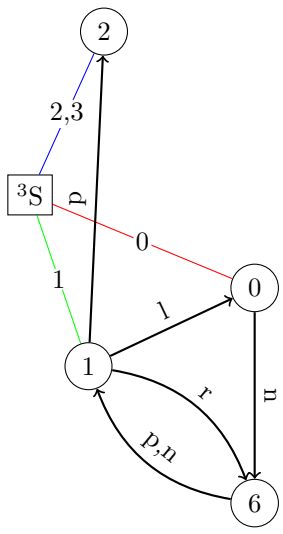
### 1.115 Critical Pair (Not Joinable)

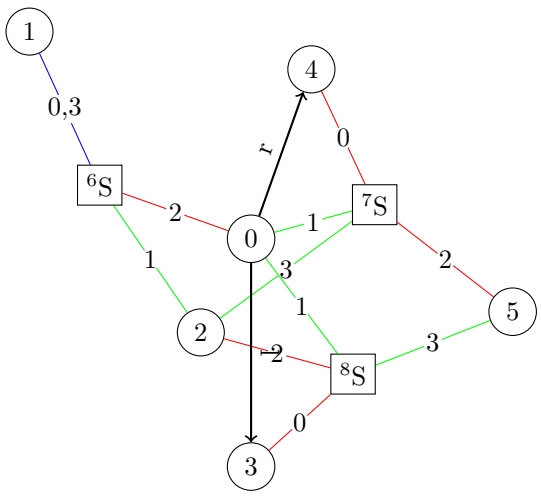


### 1.116 Critical Pair (Not Joinable)




1.9 2.7

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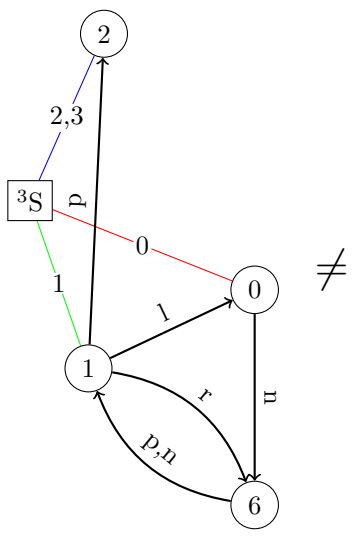


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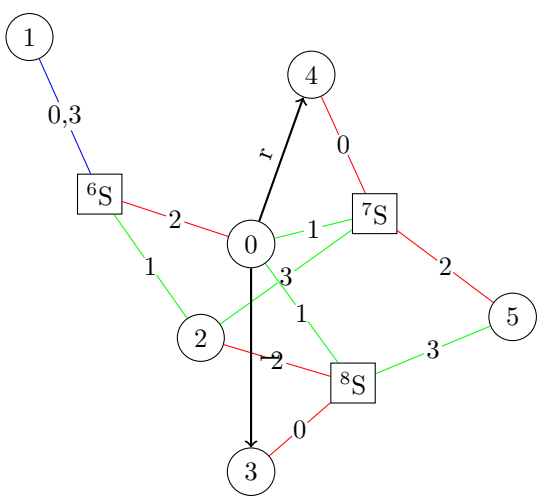
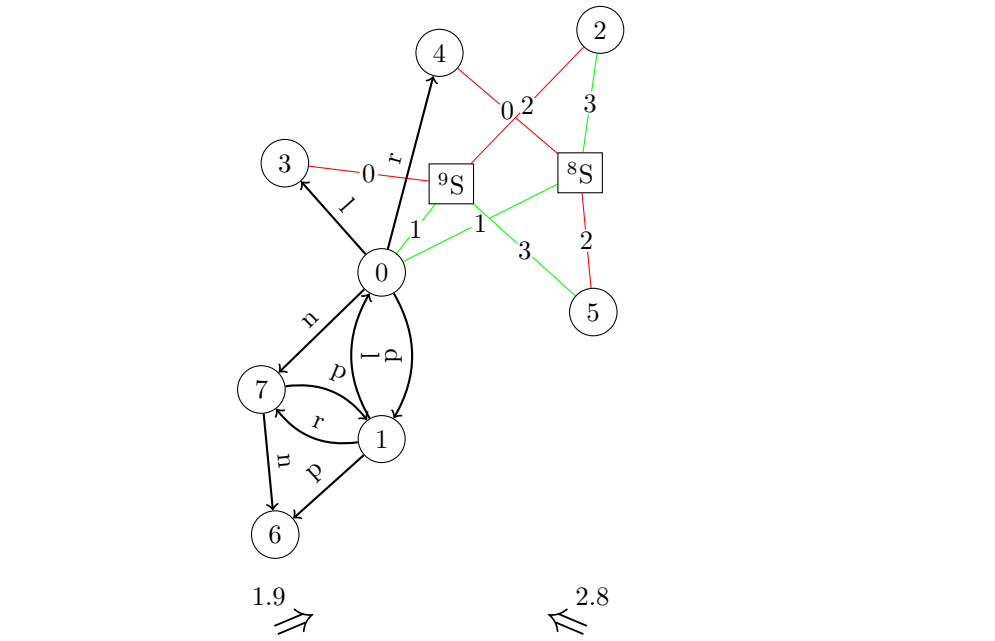
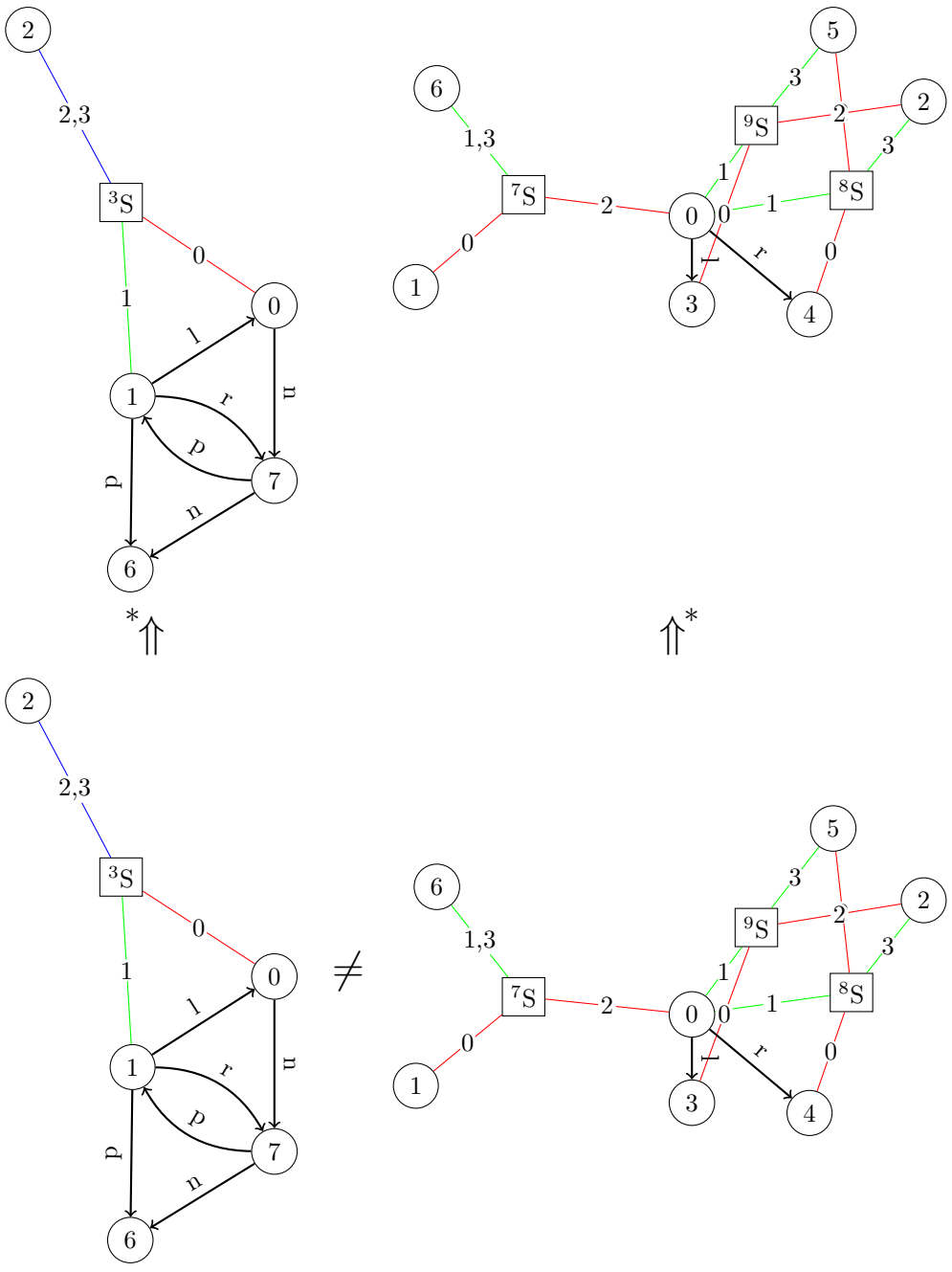


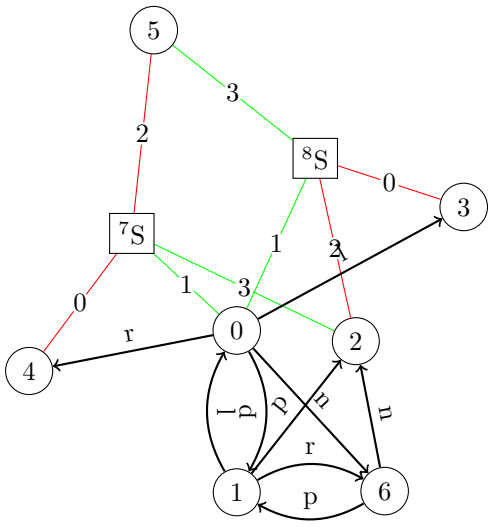
### 1.117 Critical Pair (Not Joinable)



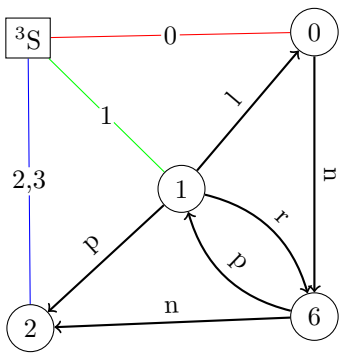

1.9 2.8

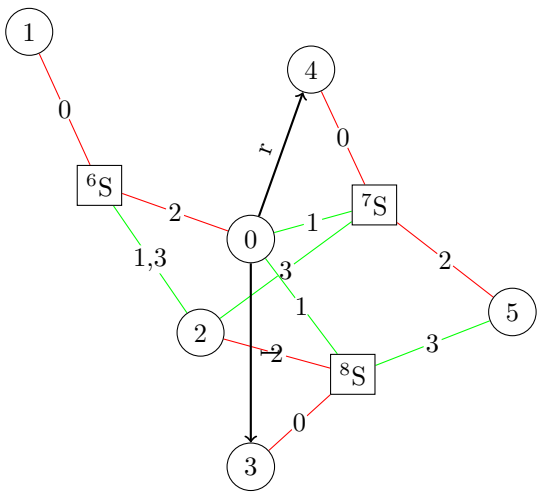


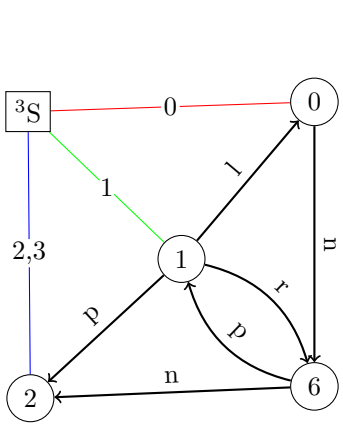
## 1.118 Critical Pair (Not Joinable)




1.9 2.8

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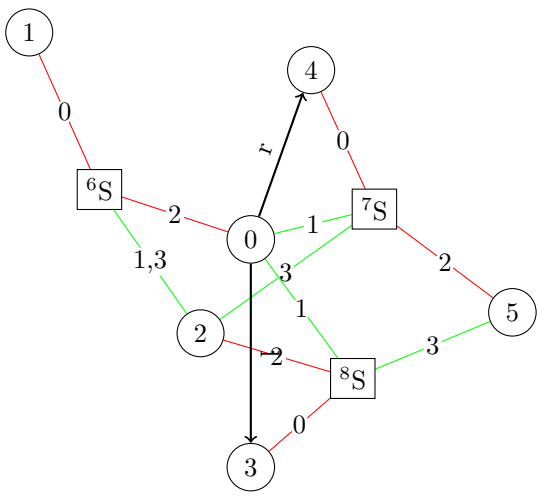
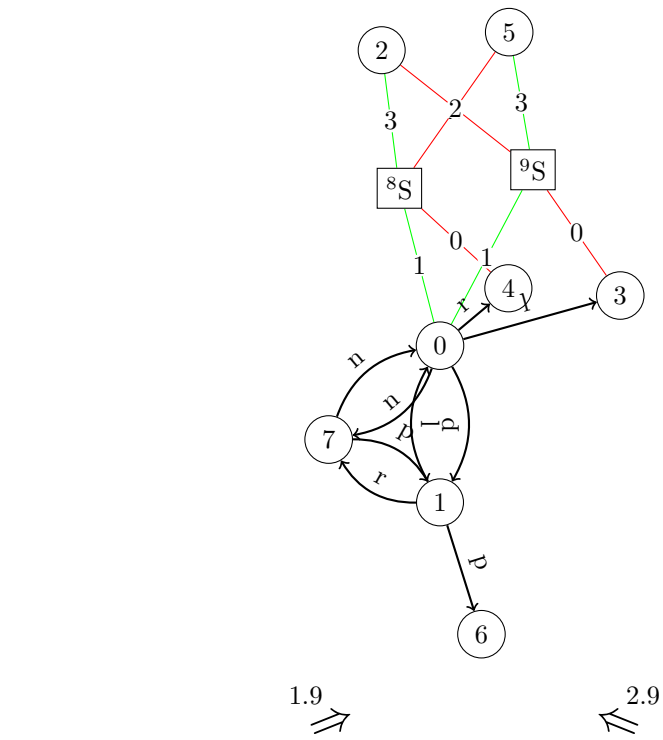
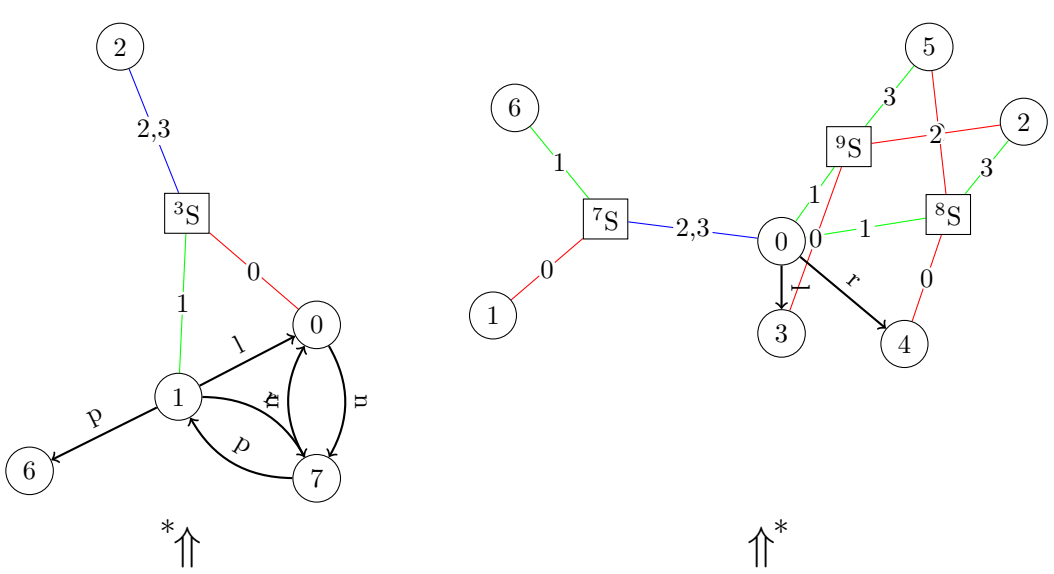


### 1.119 Critical Pair (Not Joinable)




1.9 ⇉ 2.9 ⇇

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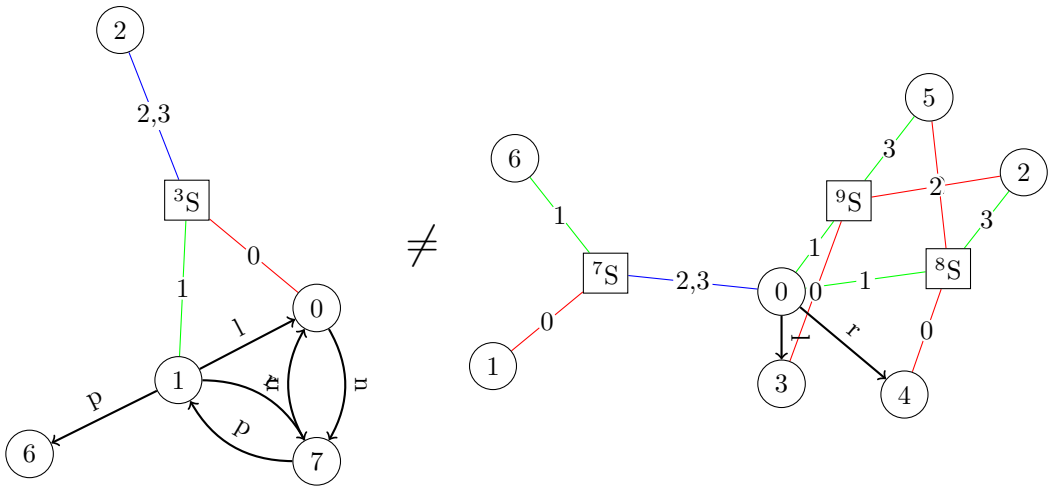
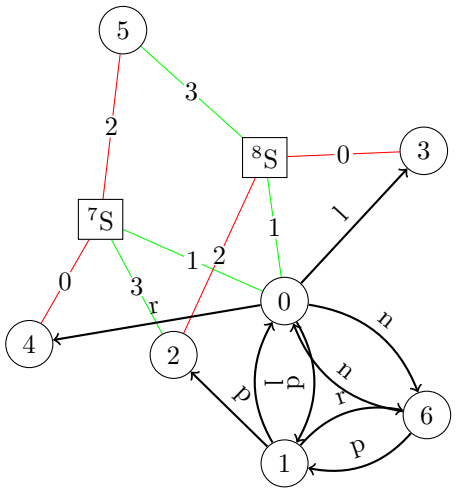
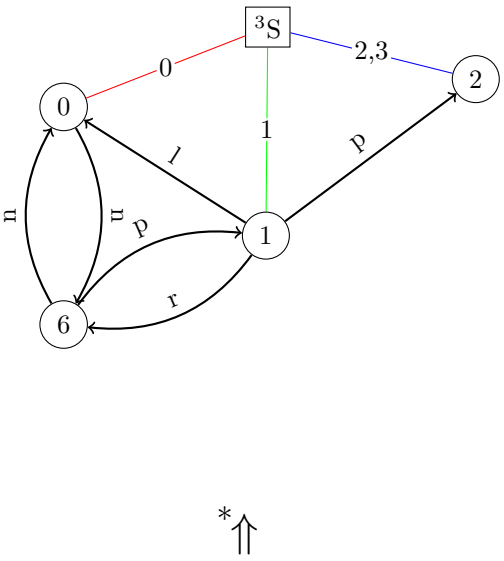
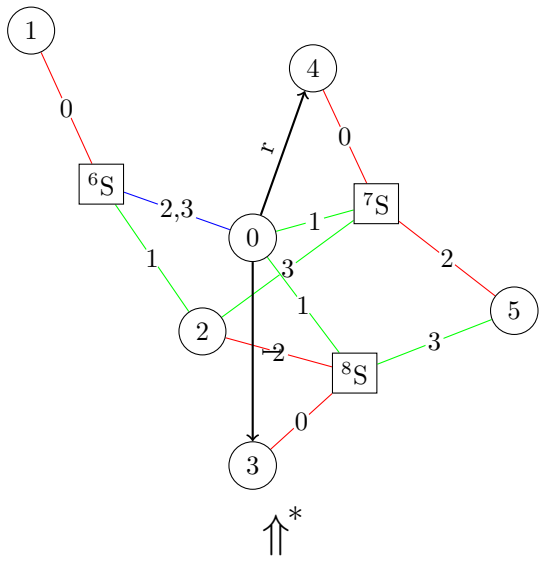


### 1.120 Critical Pair (Not Joinable)




1.9 2.9

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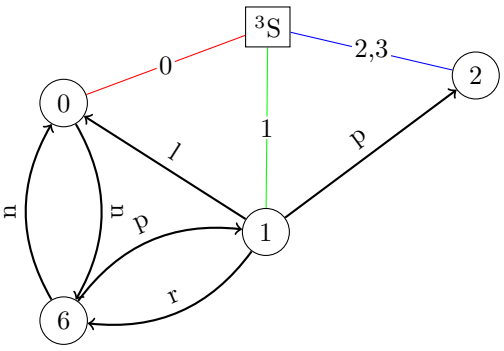


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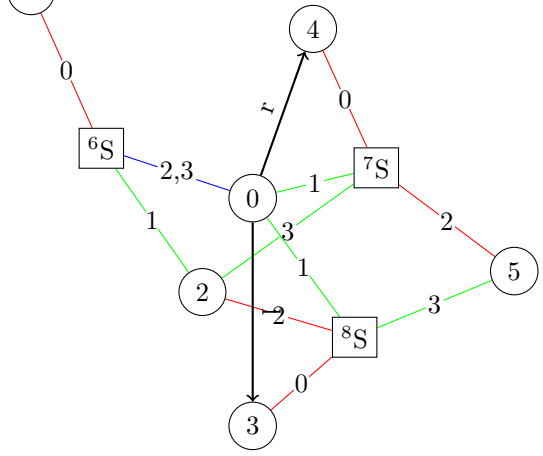
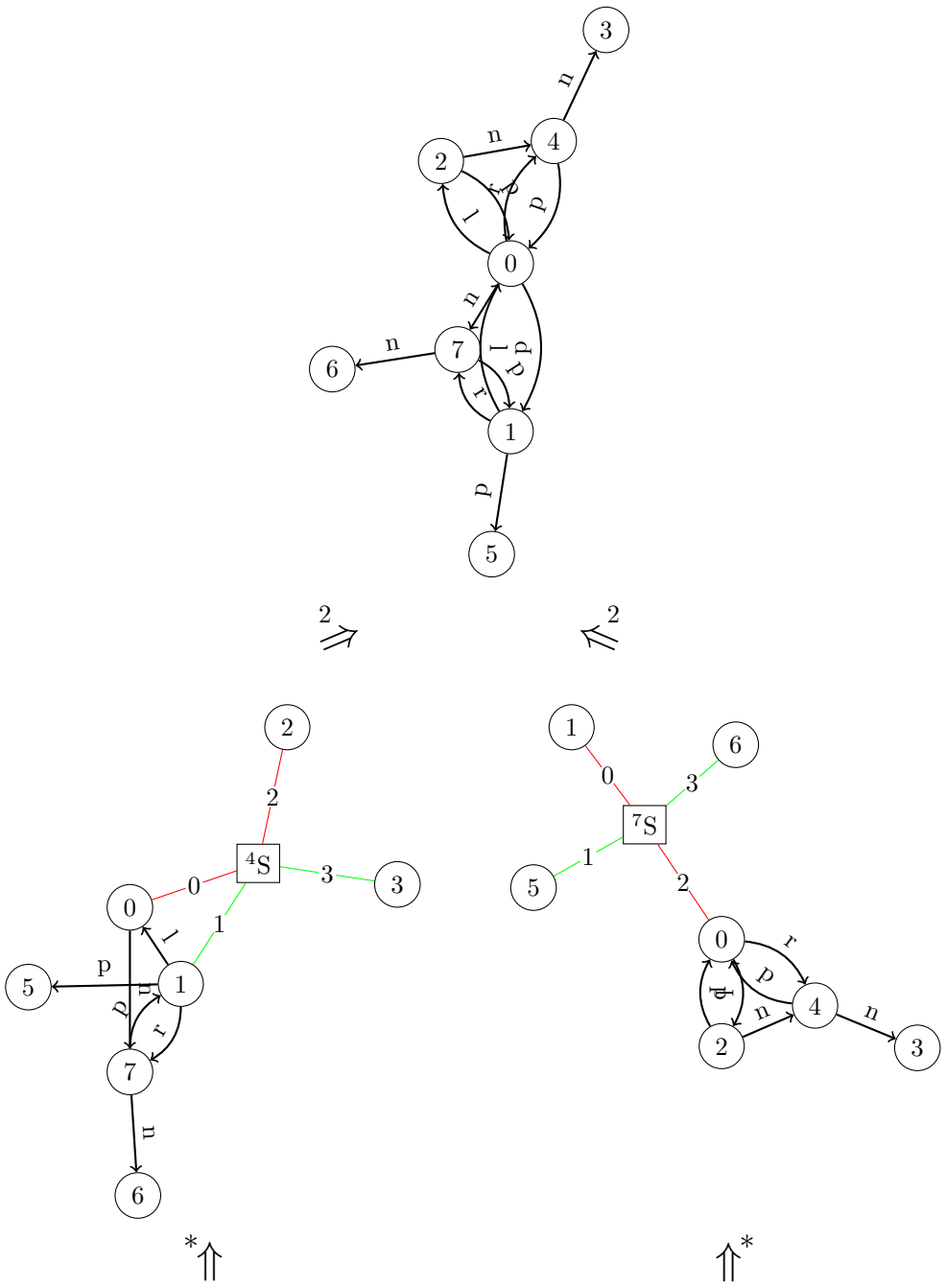


### 1.121 Critical Pair (Not Joinable)

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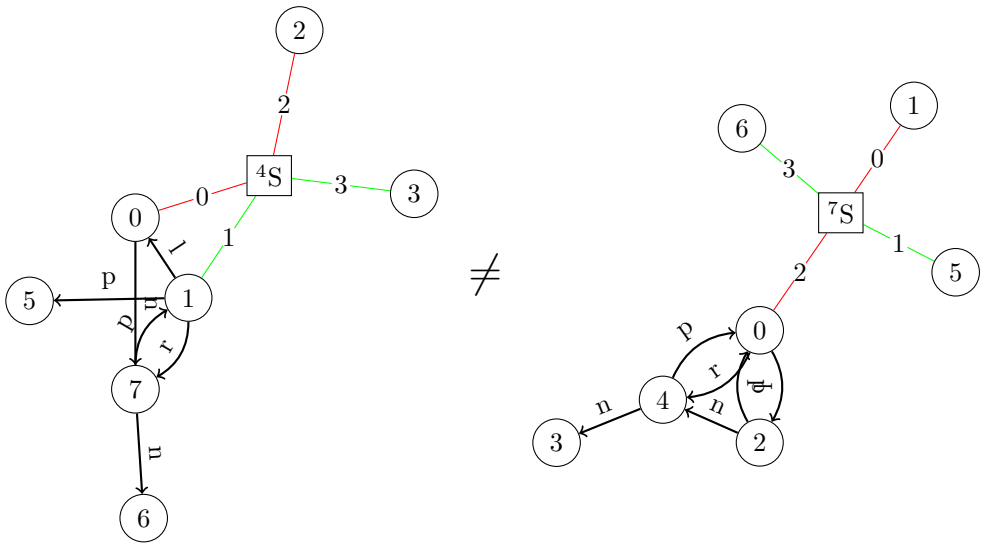
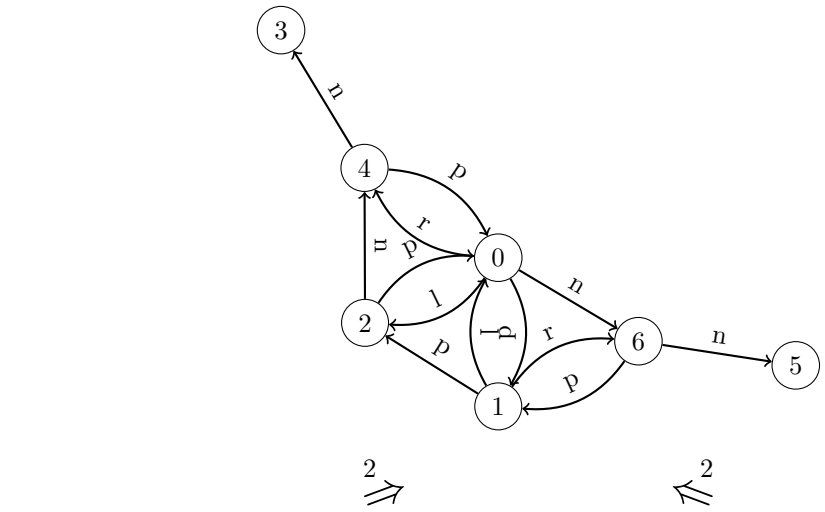


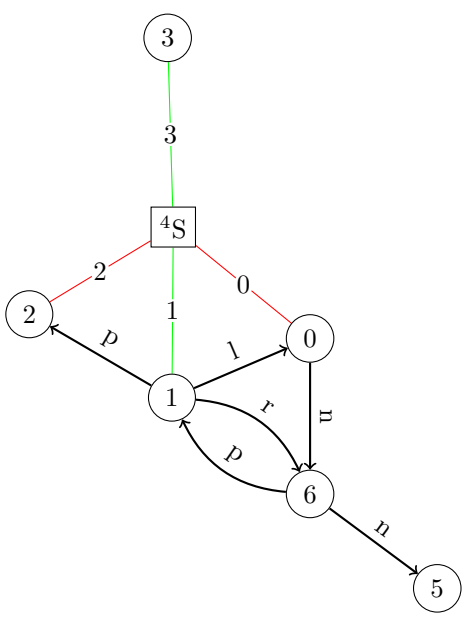
## 1.122 Critical Pair (Not Joinable)

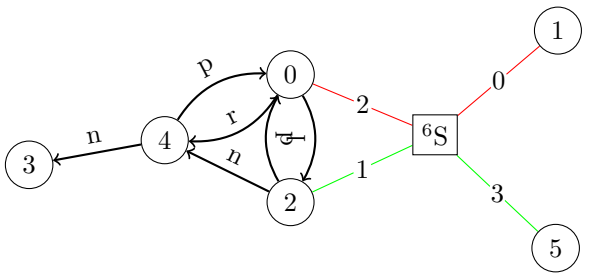


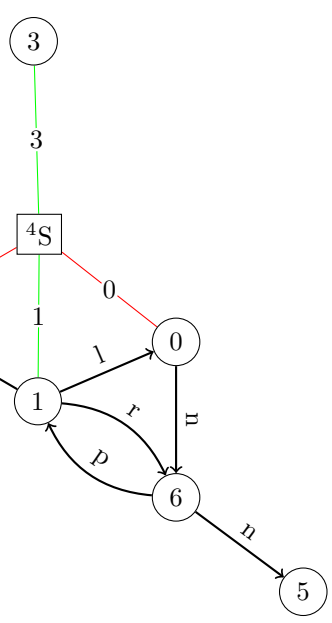






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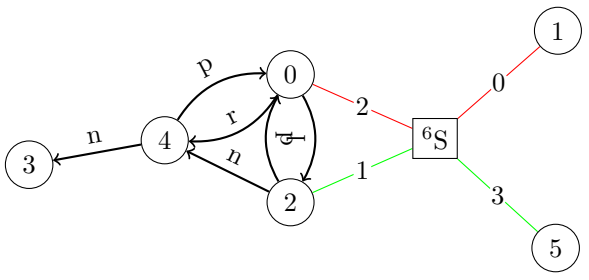
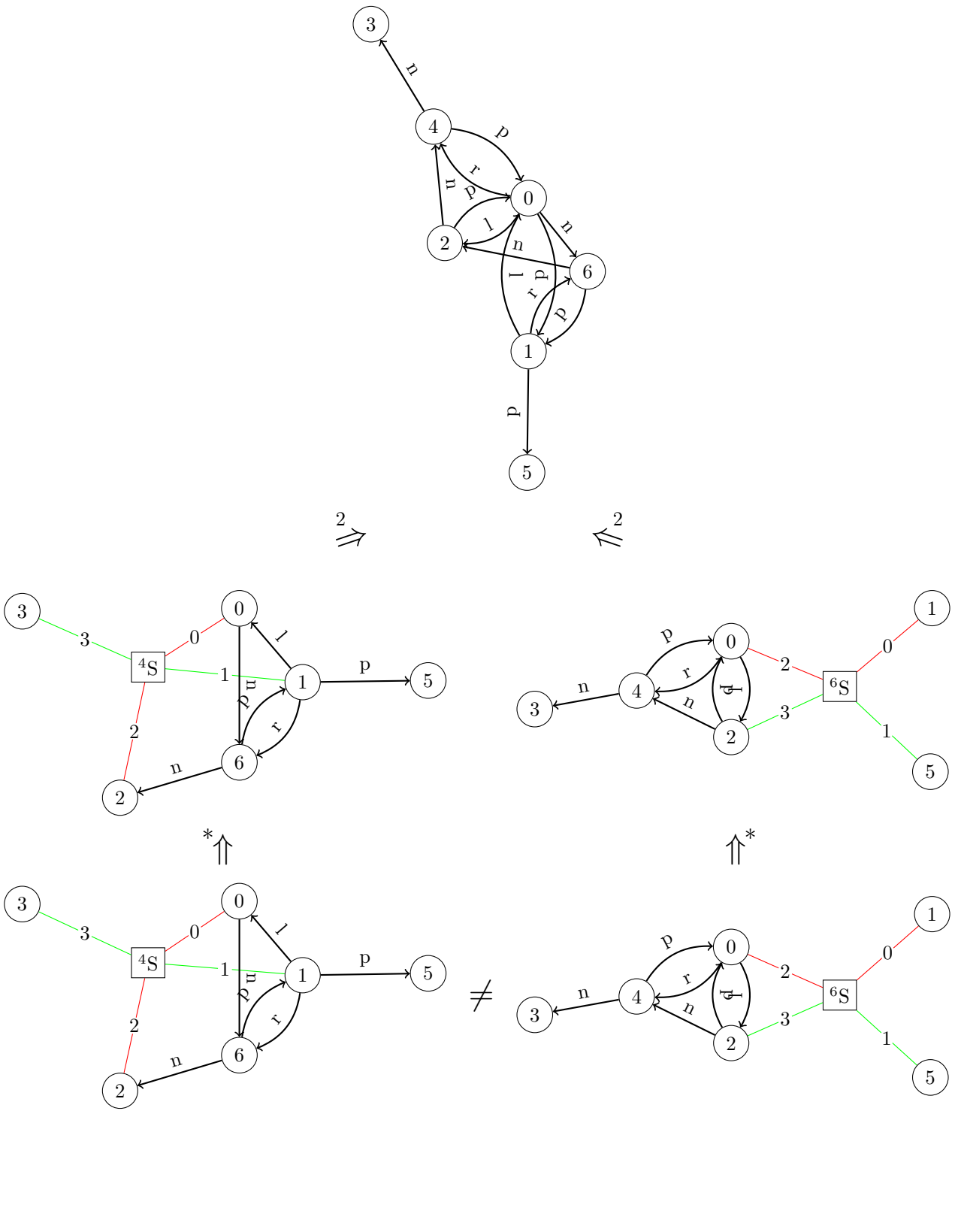


### 1.123 Critical Pair (Not Joinable)



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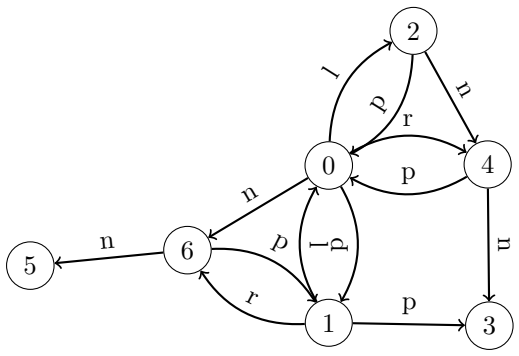
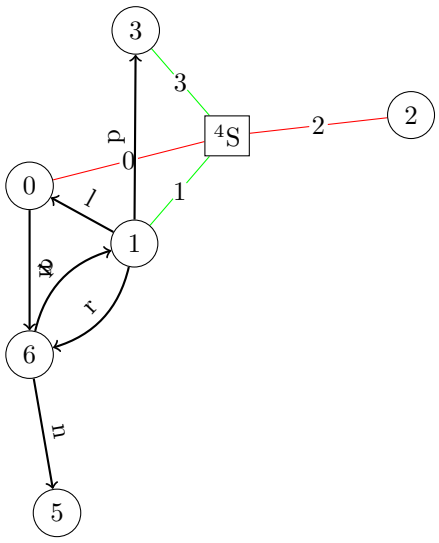
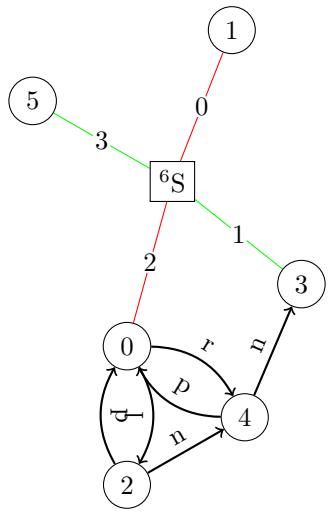
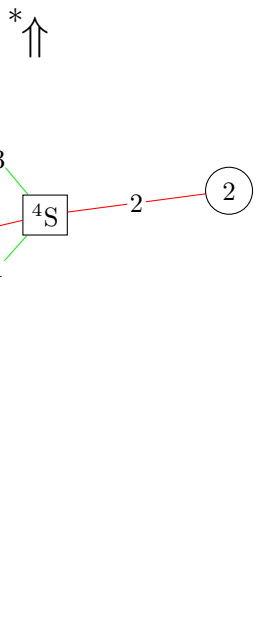
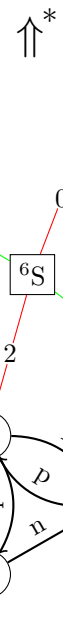
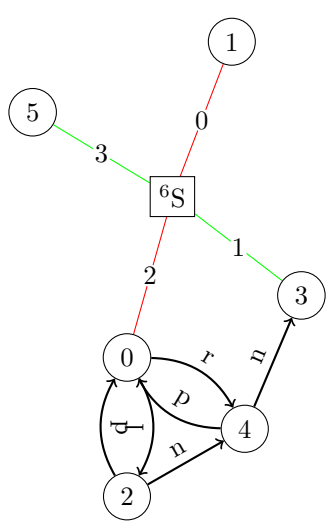




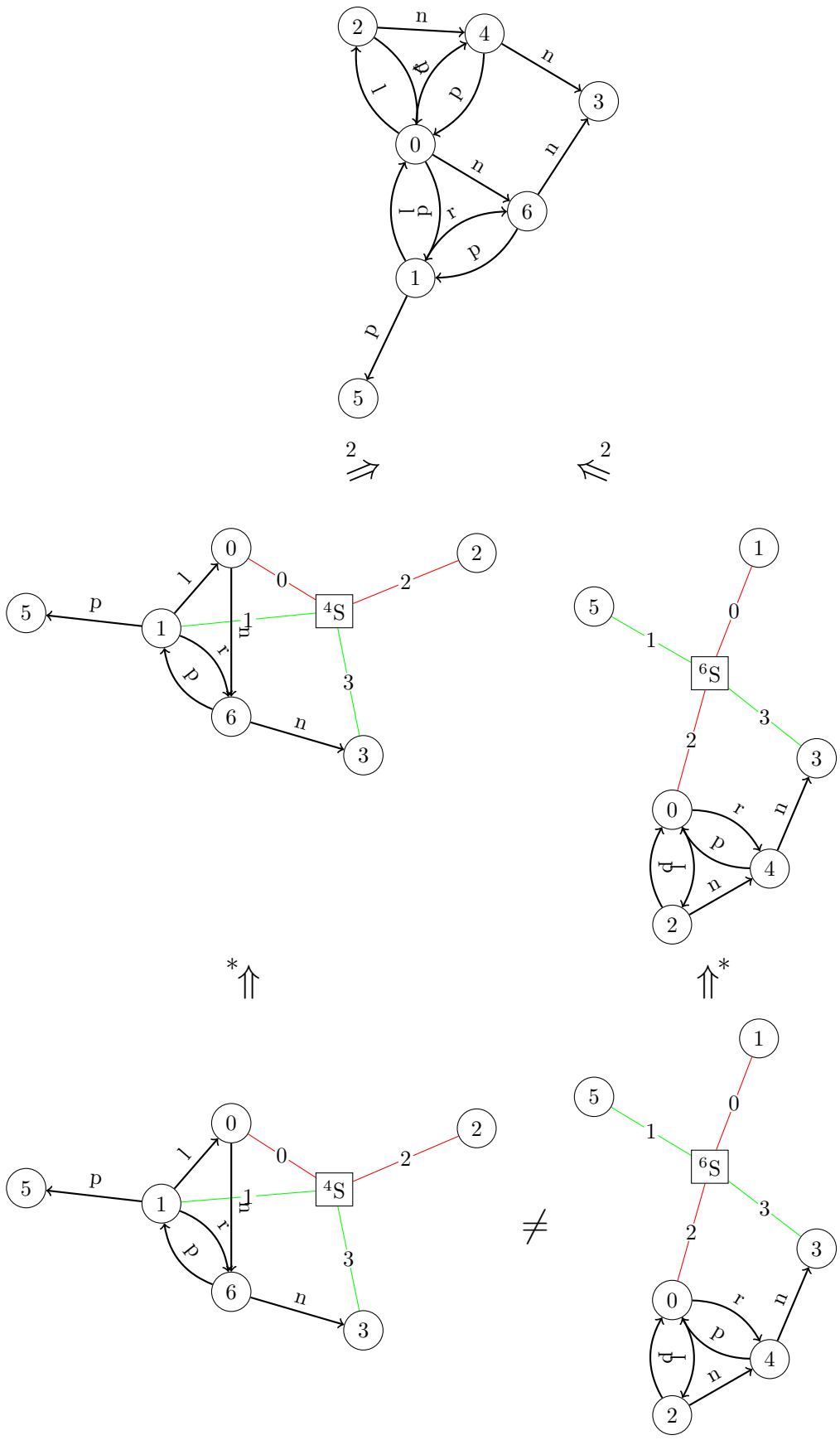



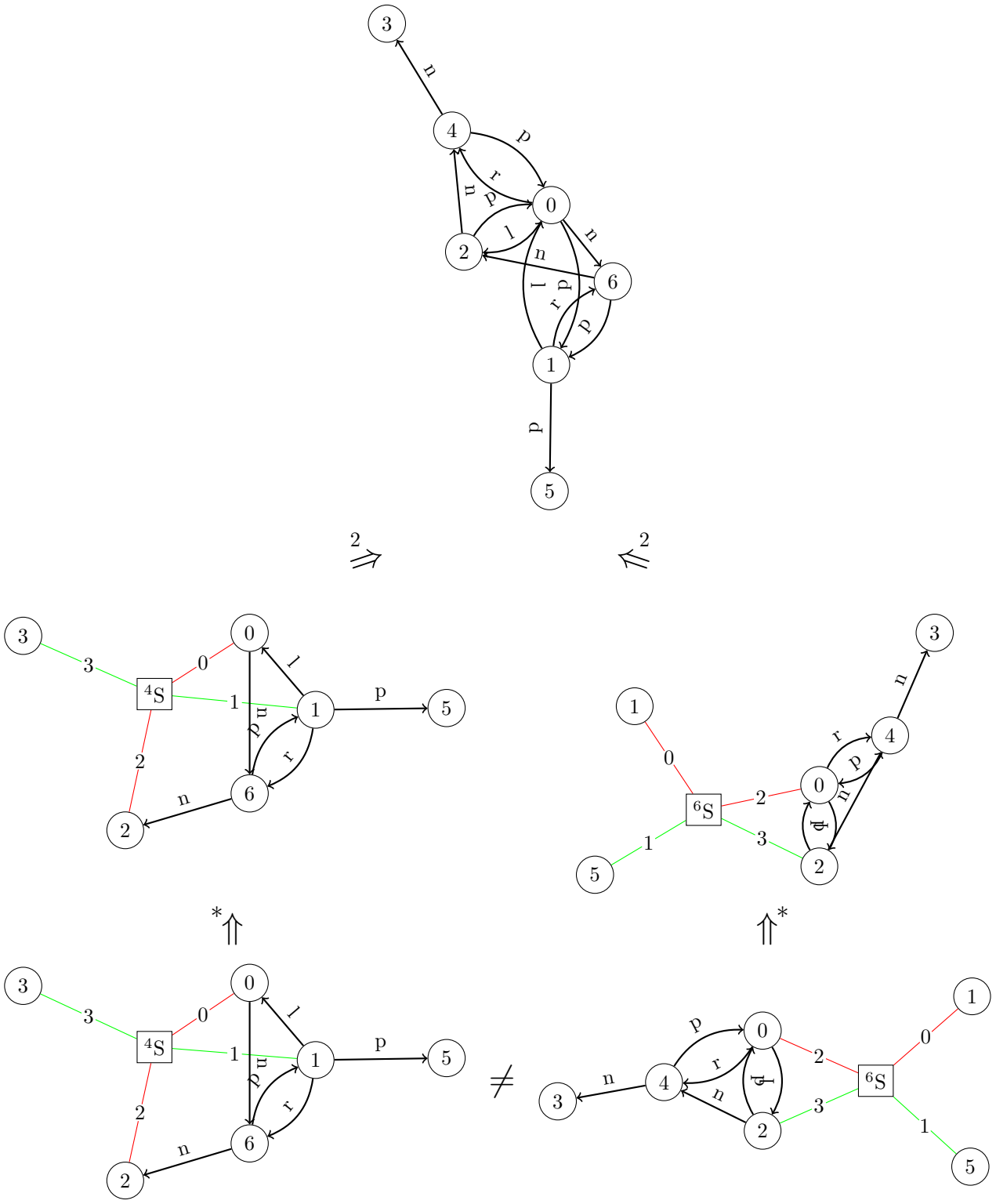





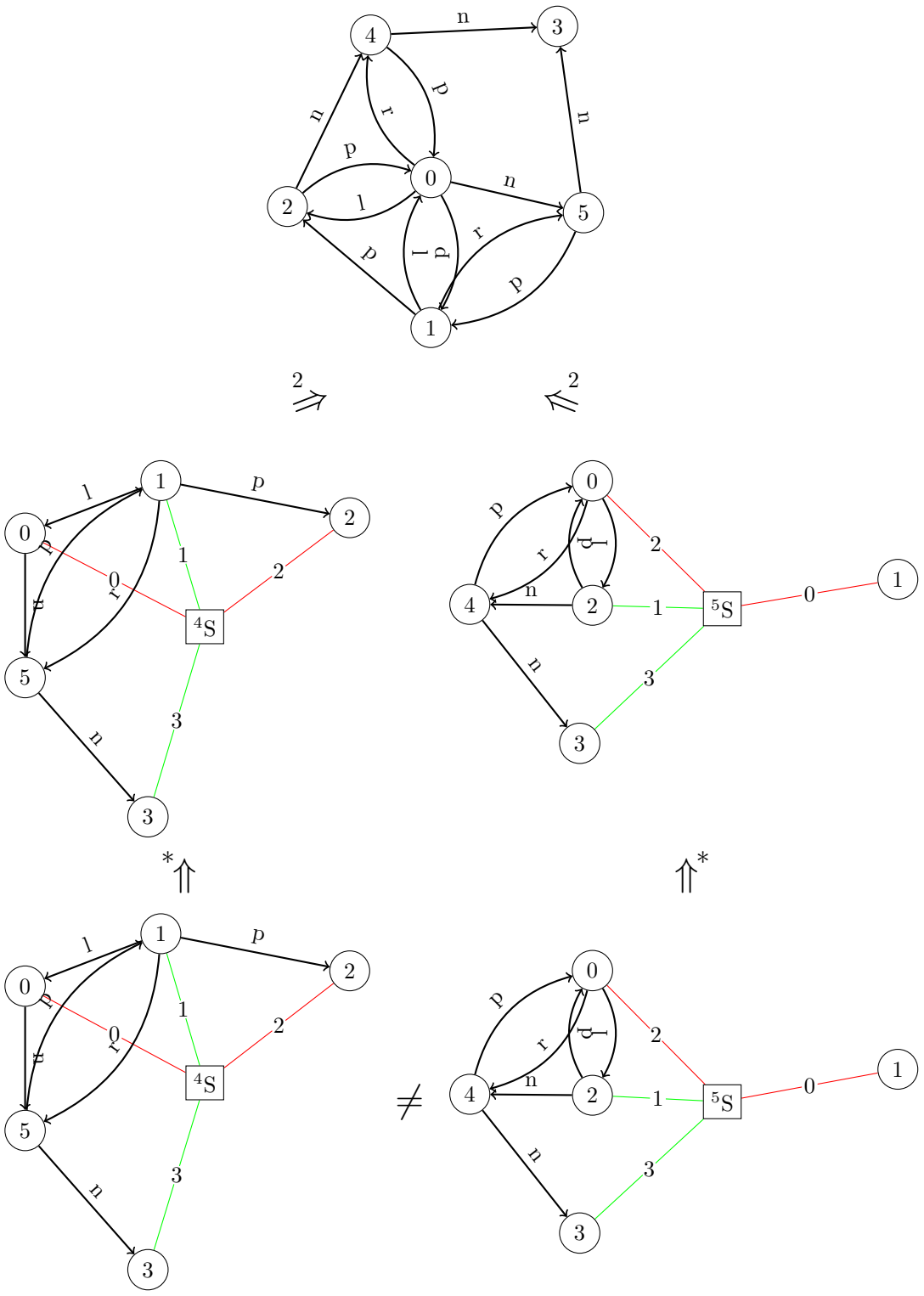
## 1.125 Critical Pair (Not Joinable)



### 1.126 Critical Pair (Not Joinable)



### 1.127 Critical Pair (Not Joinable)

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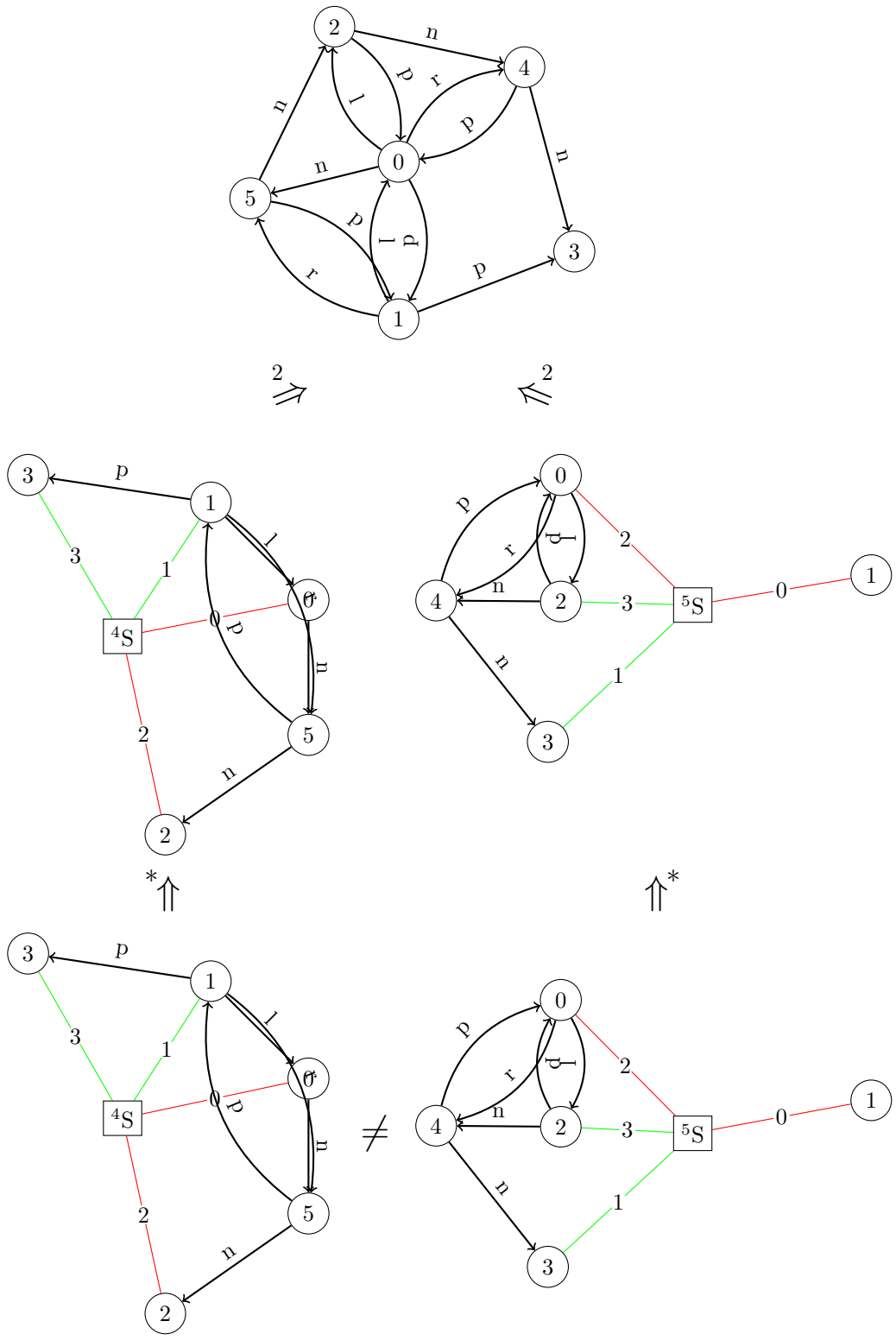
### 1.128 Critical Pair (Not Joinable)



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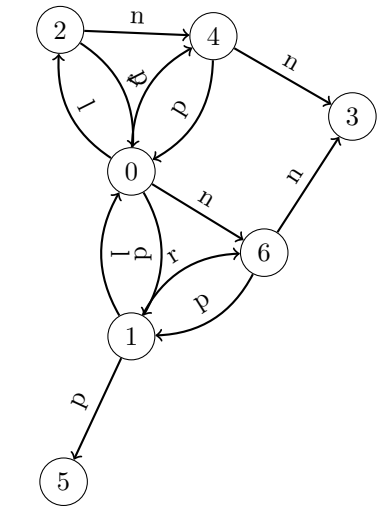
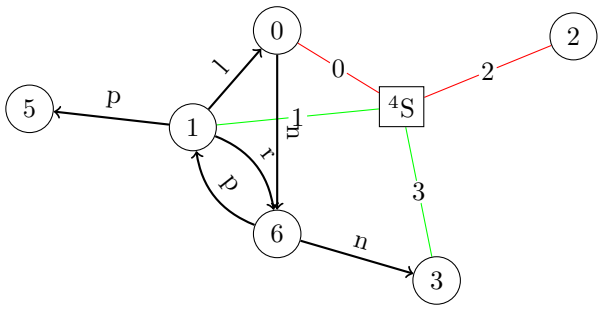
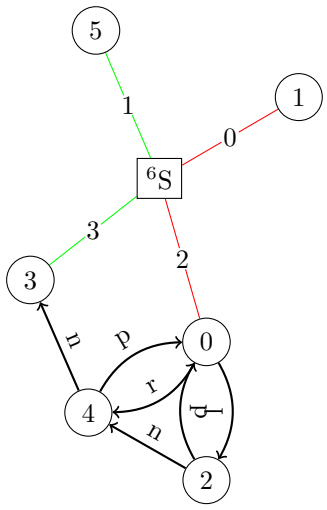



2 2

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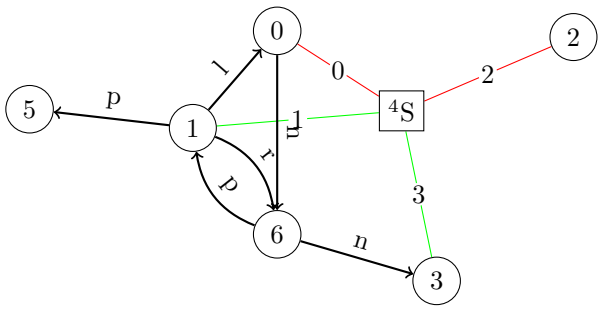


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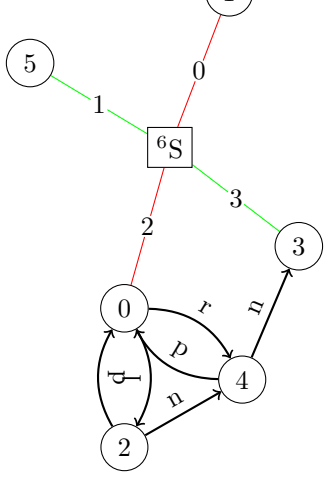

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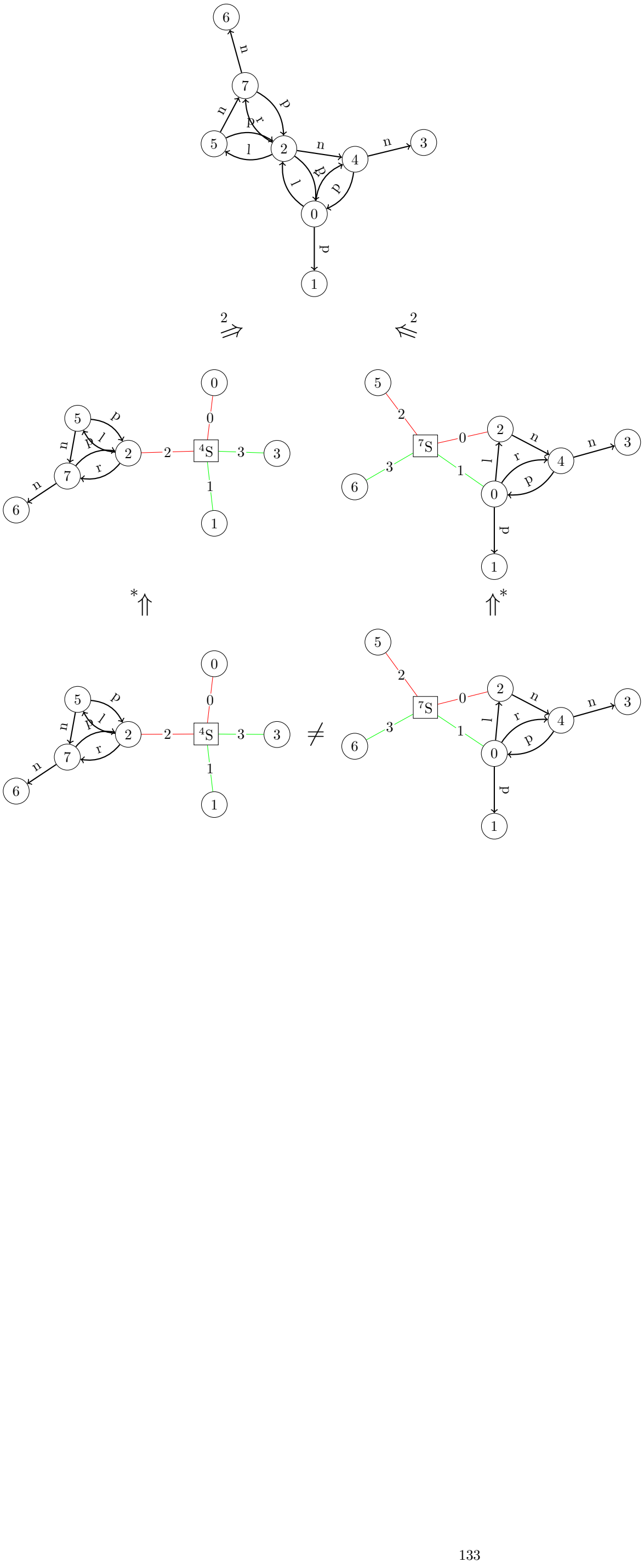

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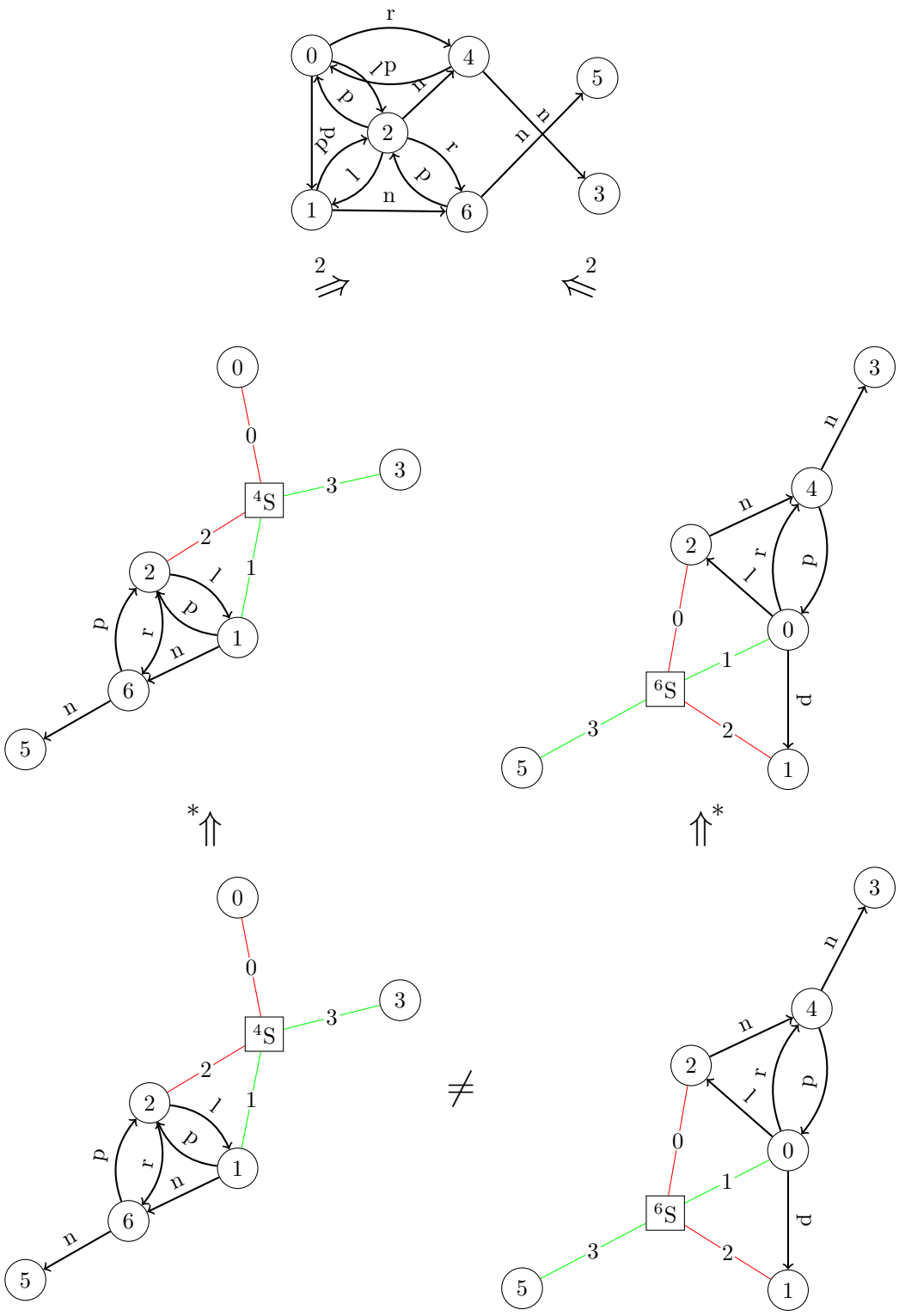

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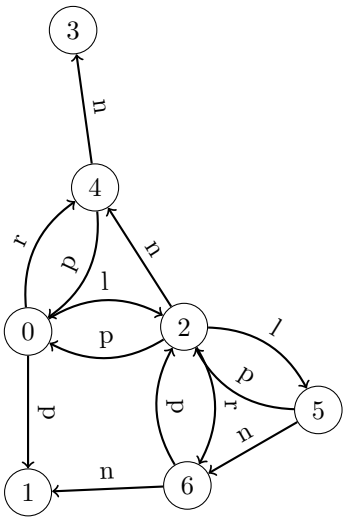

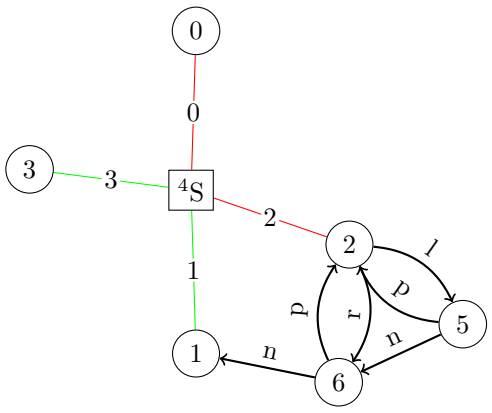

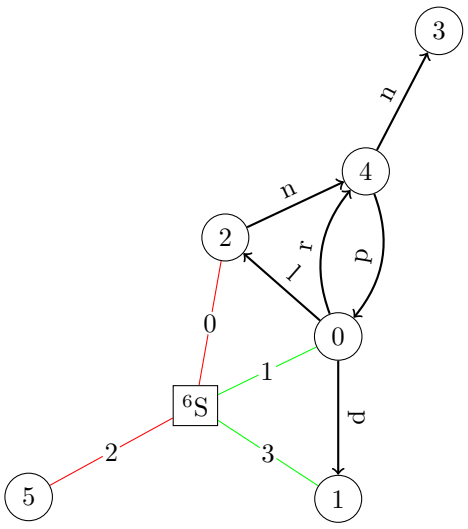

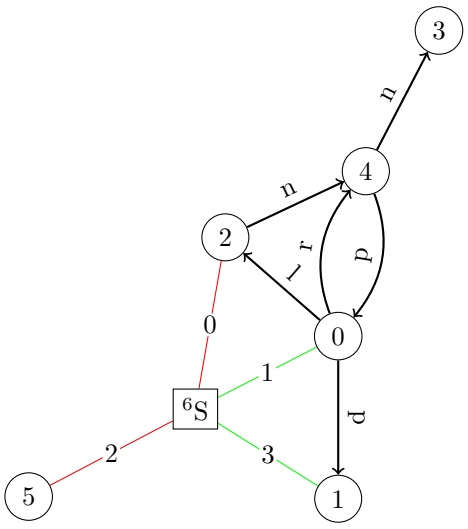


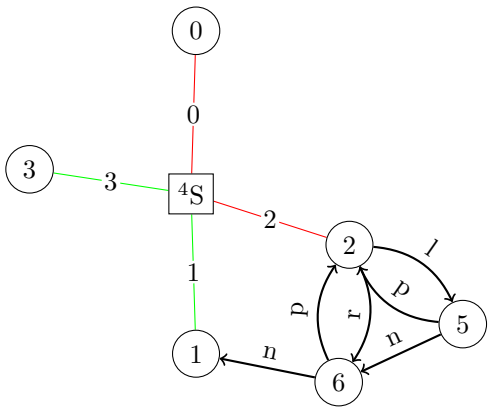


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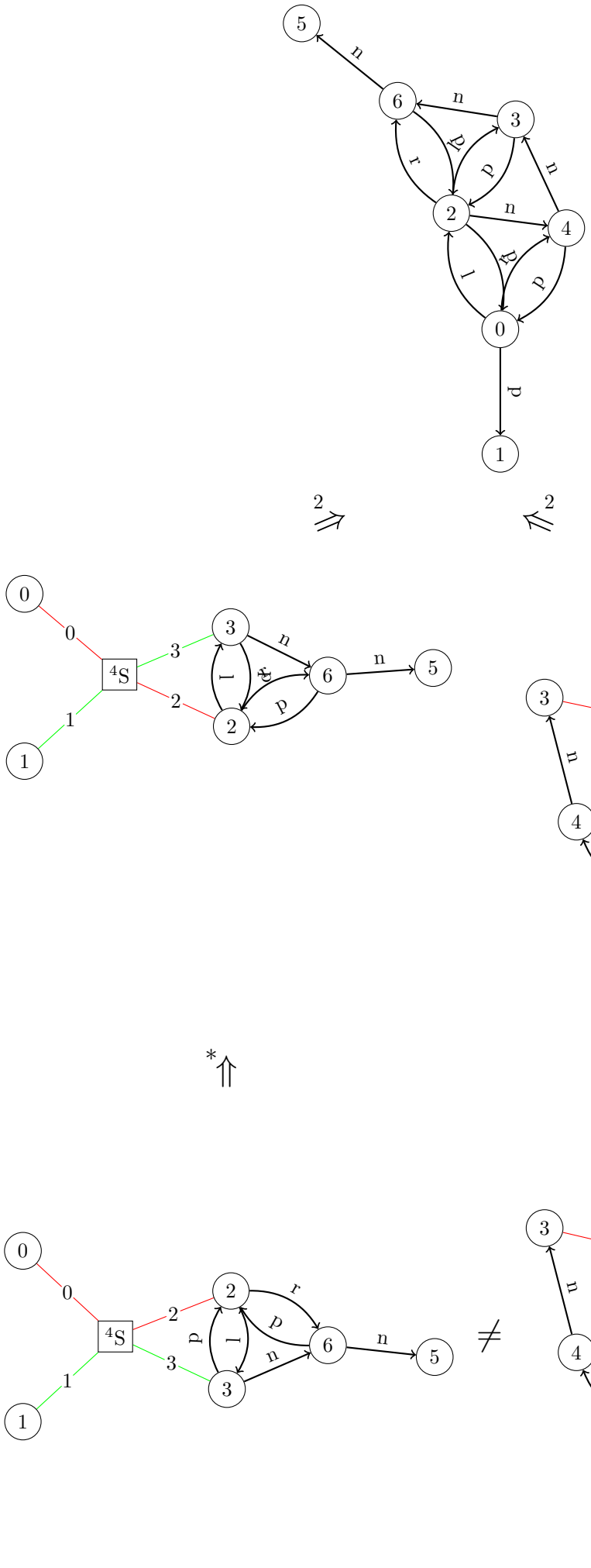
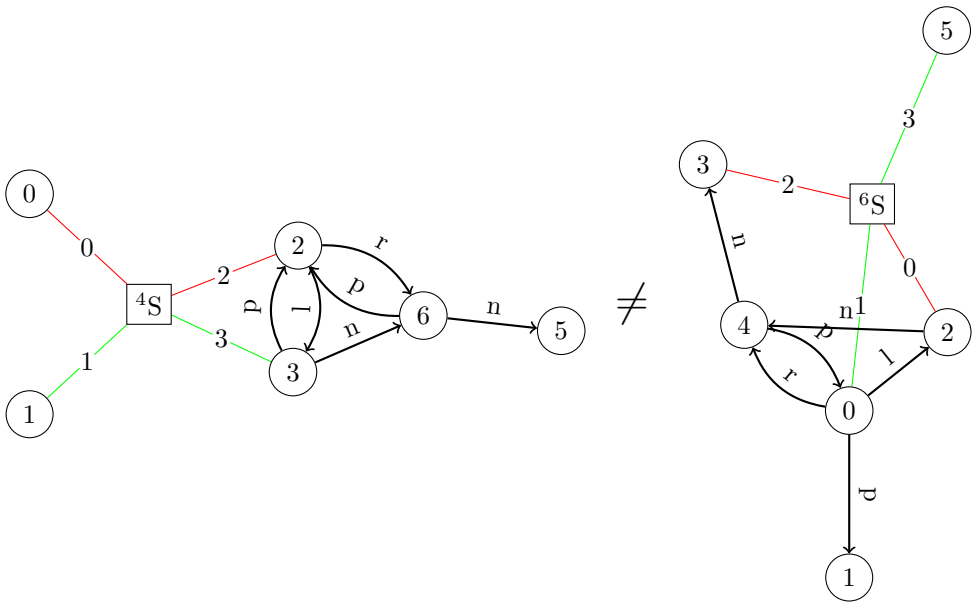
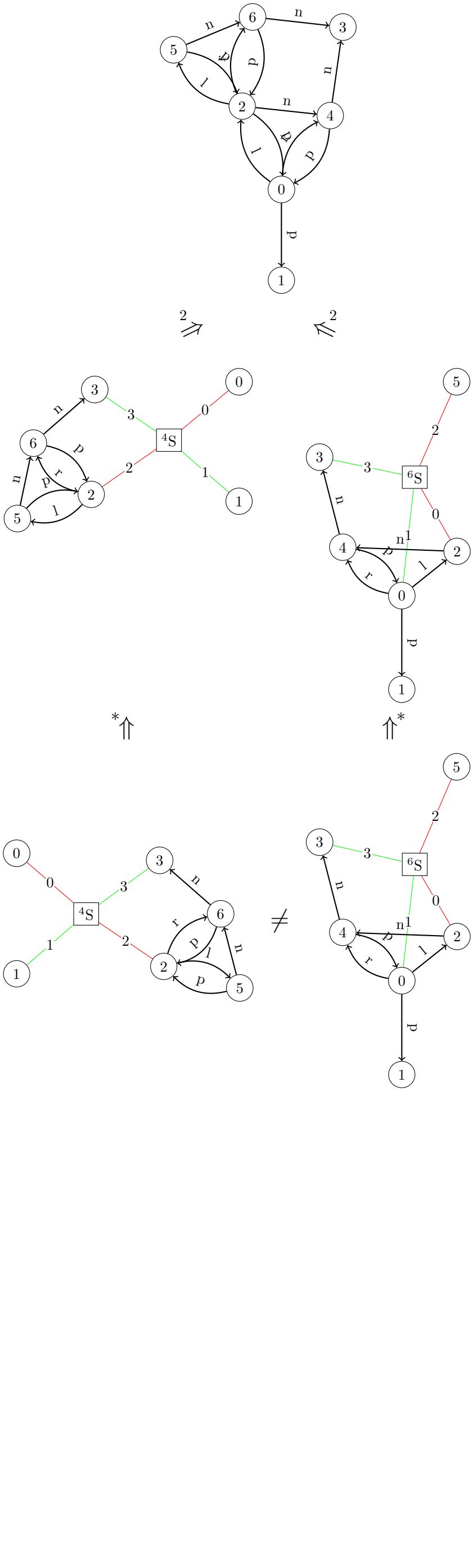
### 1.133 Critical Pair (Not Joinable)

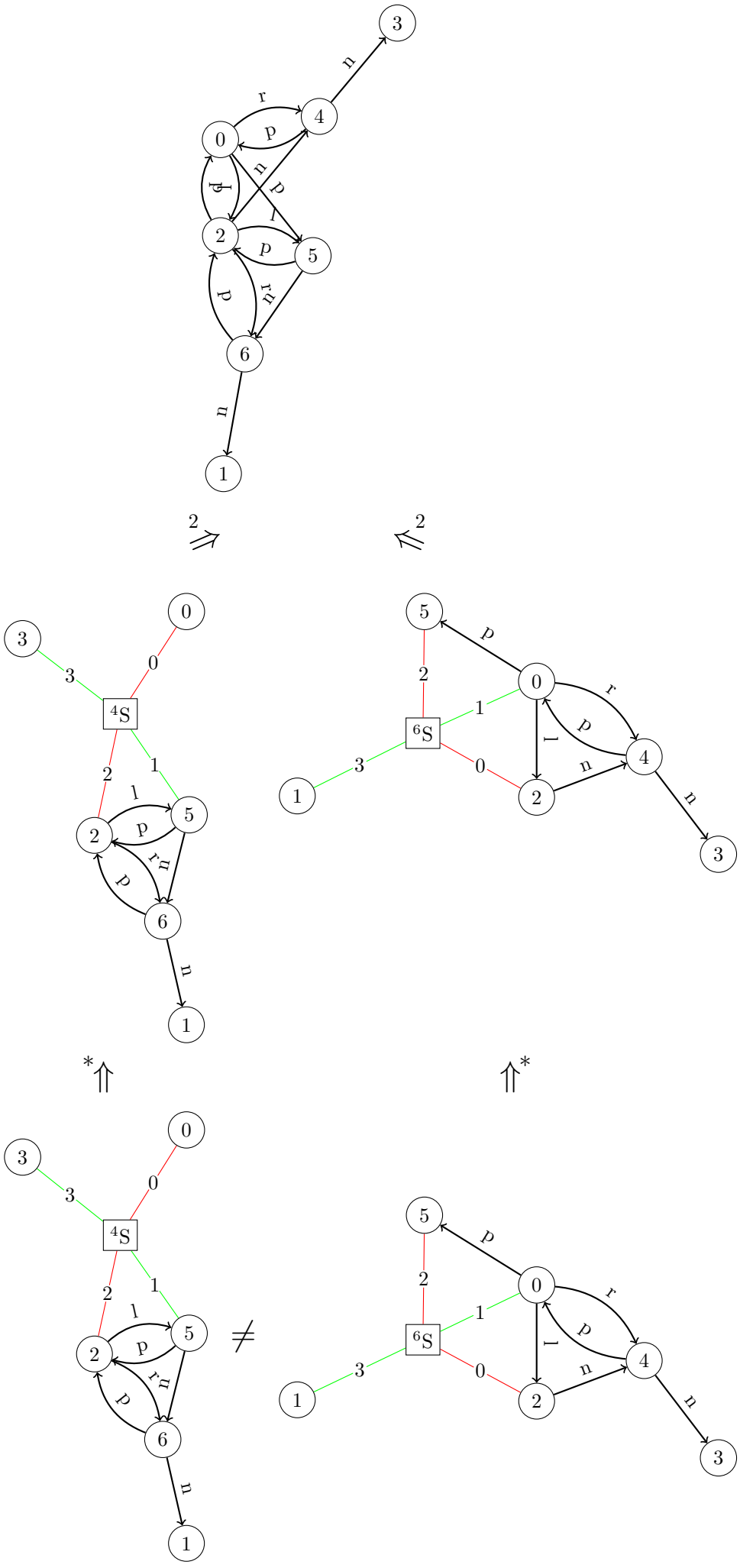


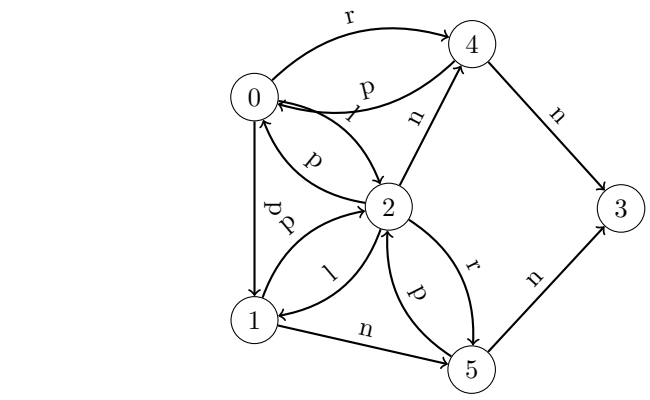
### 1.134 Critical Pair (Not Joinable)

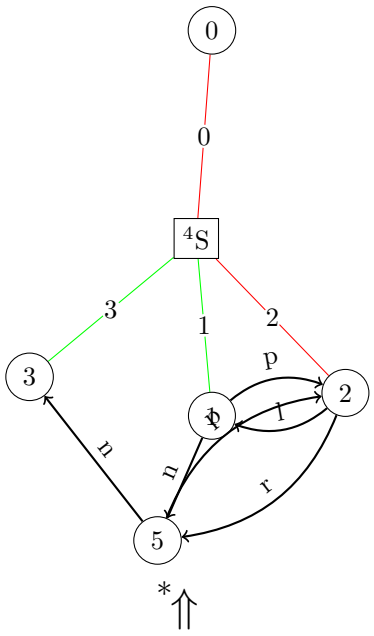


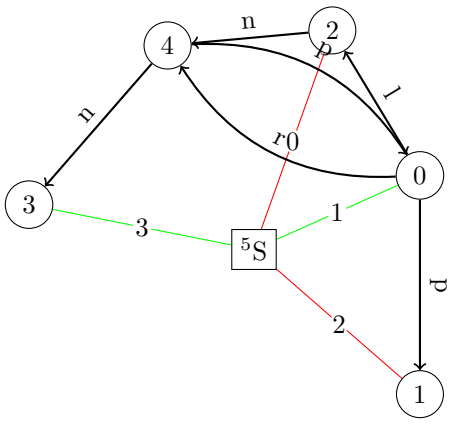
### 1.135 Critical Pair (Not Joinable)

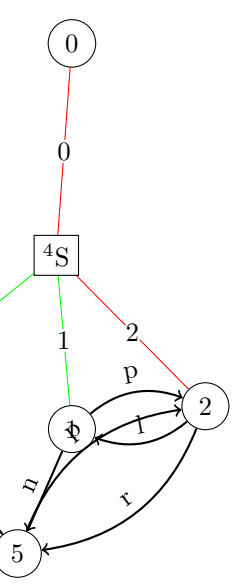


### 1.136 Critical Pair (Not Joinable)









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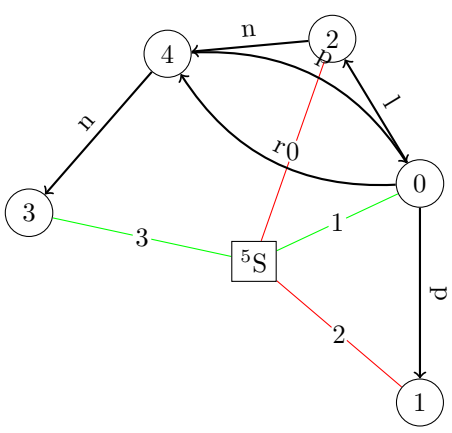
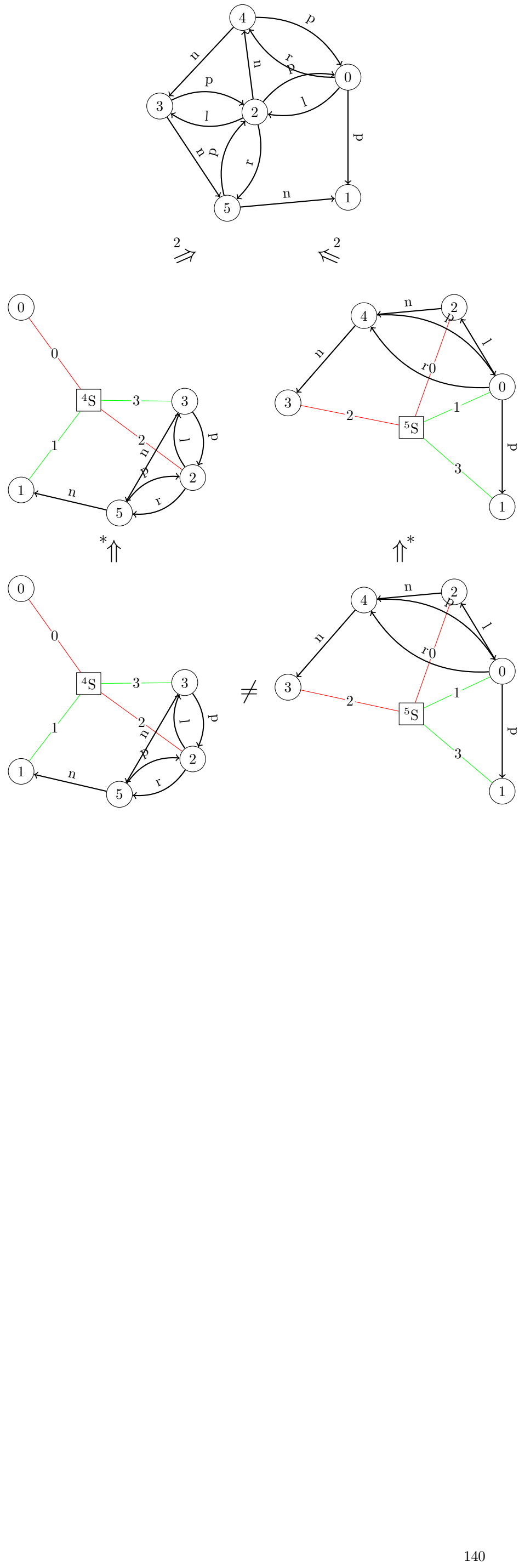
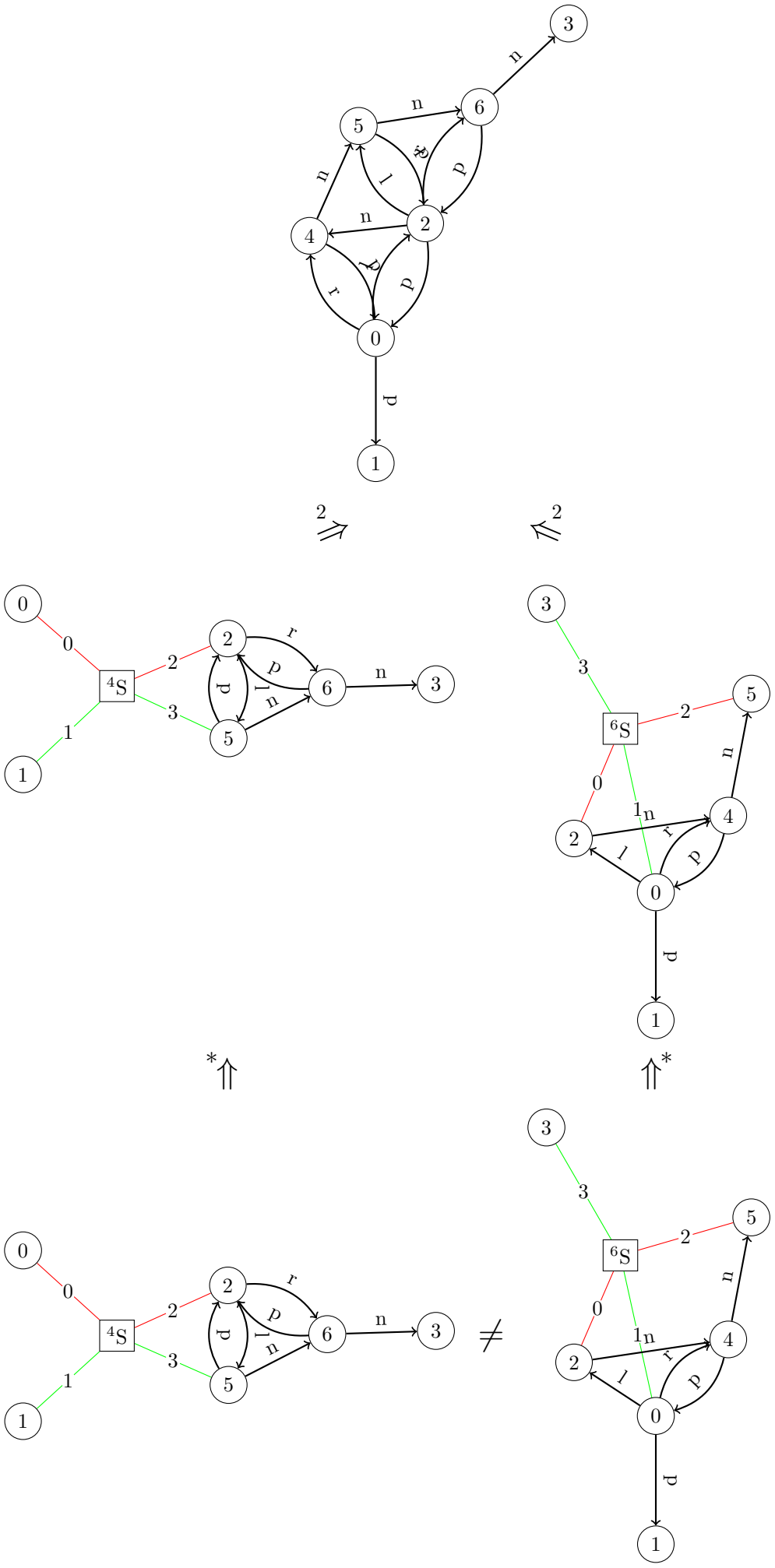


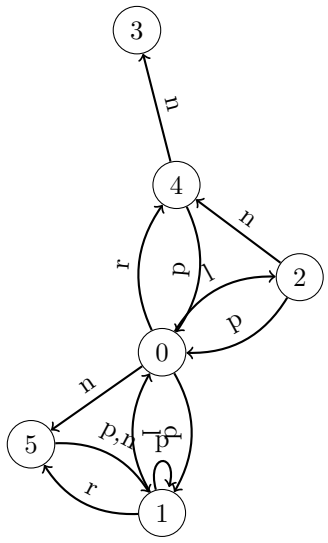
### 1.137 Critical Pair (Not Joinable)



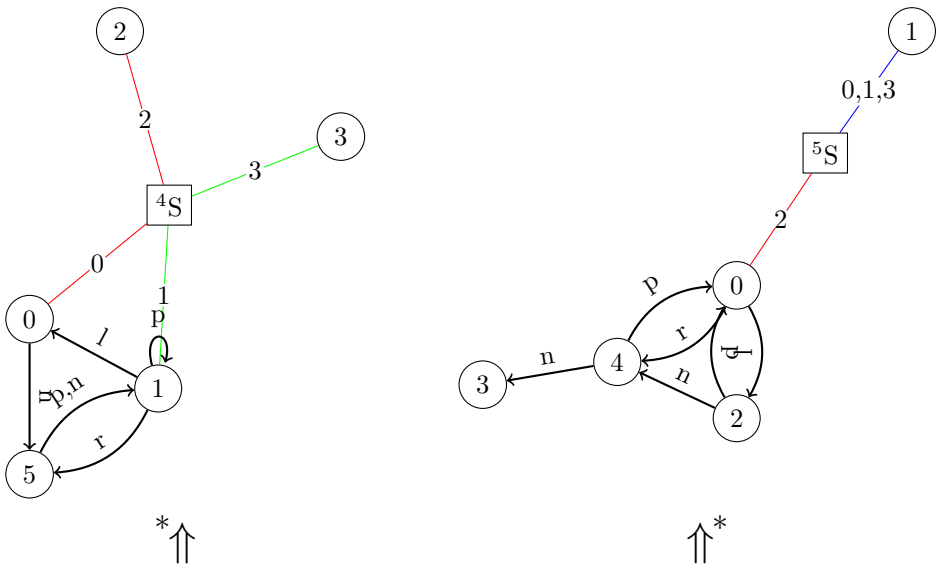
## 1.138 Critical Pair (Not Joinable)



### 1.139 Critical Pair (Not Joinable)




2 2.1

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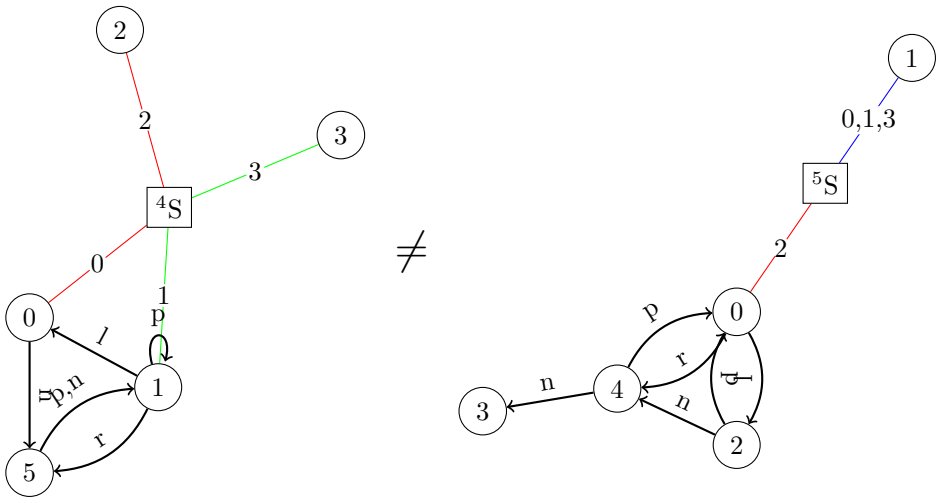
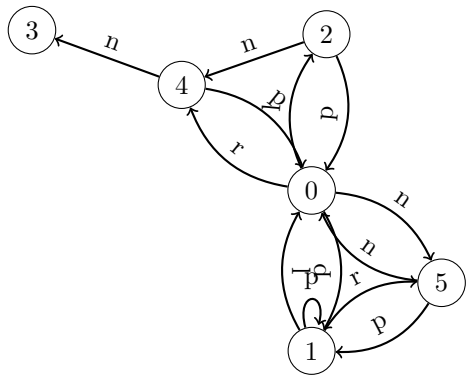
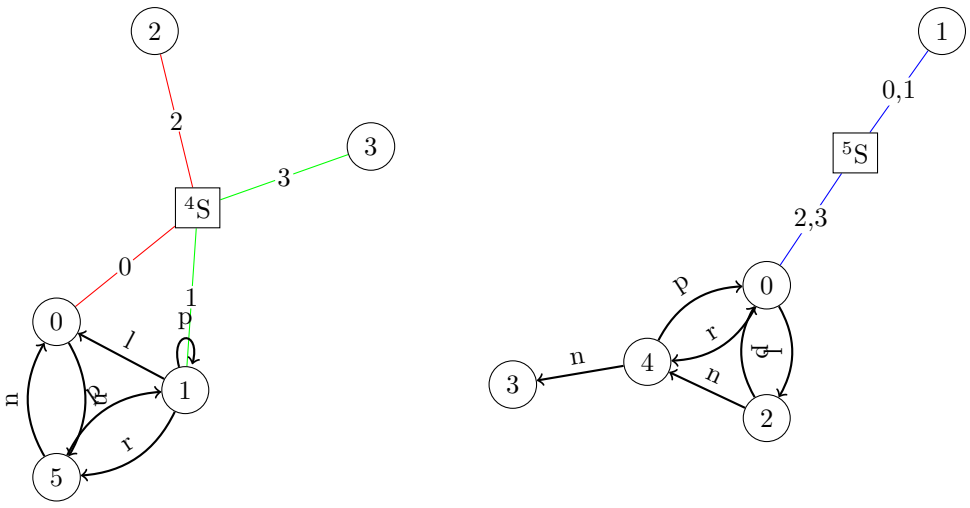


### 1.140 Critical Pair (Not Joinable)




2 ⇛ ⇚ 2.2

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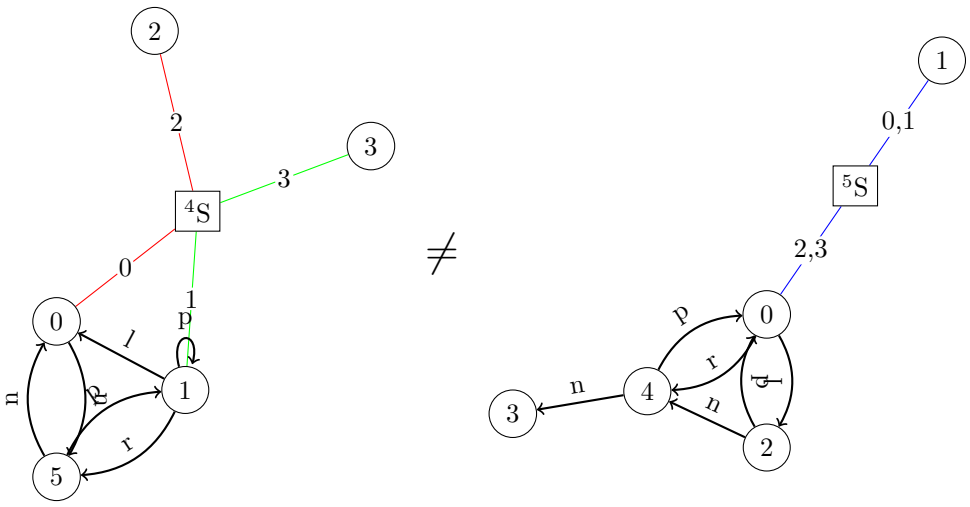
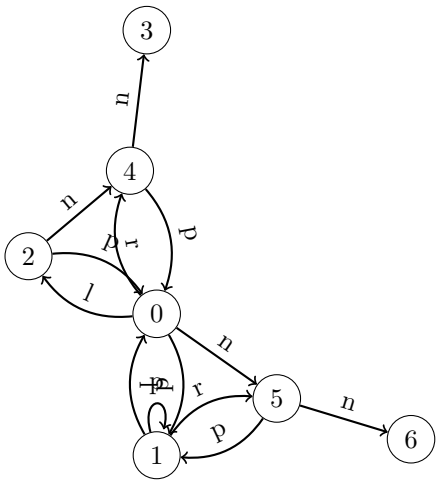
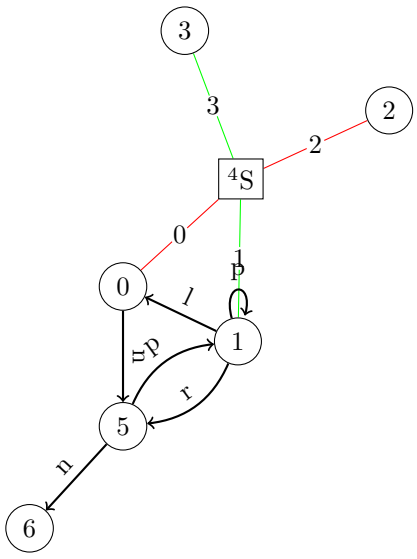
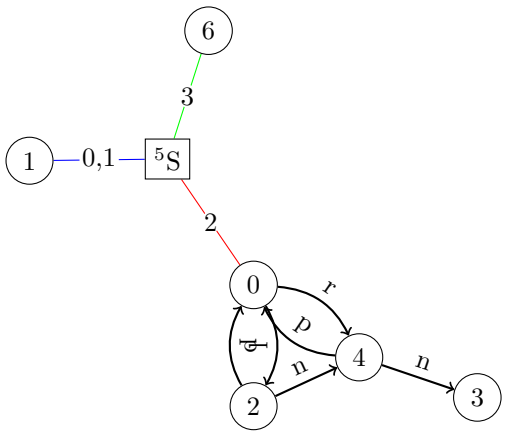


### 1.141 Critical Pair (Not Joinable)




2 2.3

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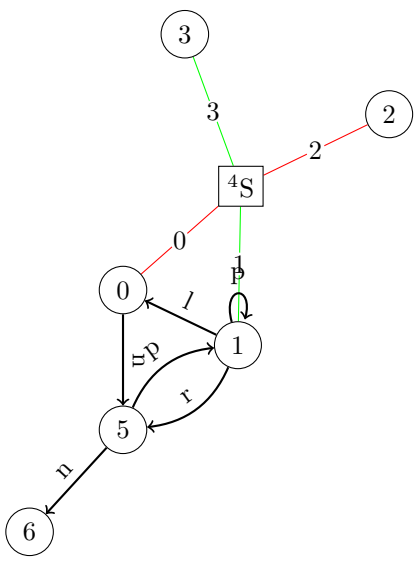


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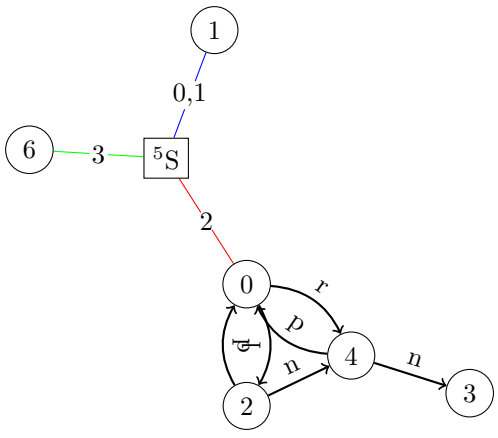
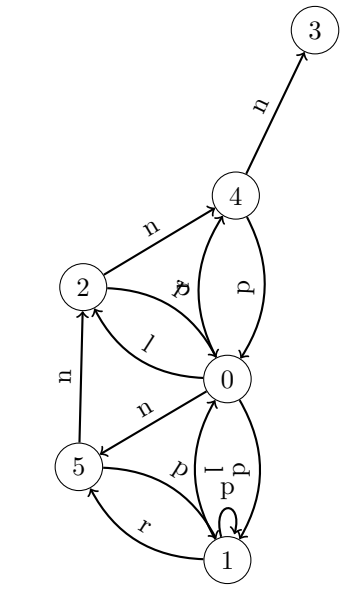
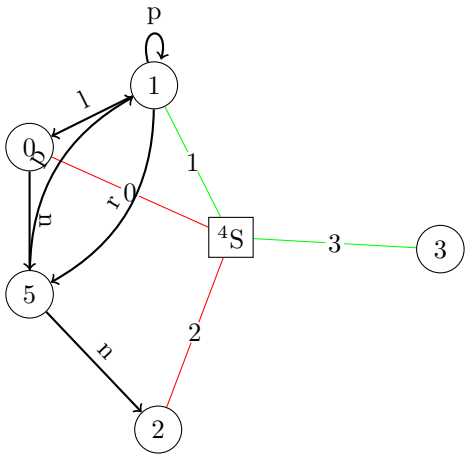


### 1.142 Critical Pair (Not Joinable)




2 2.3

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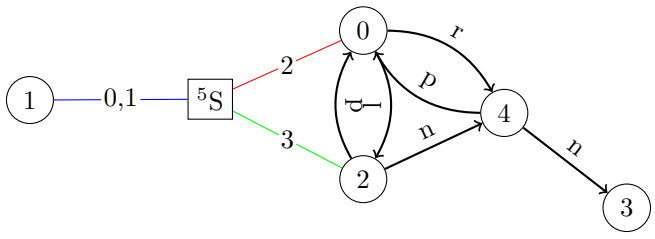


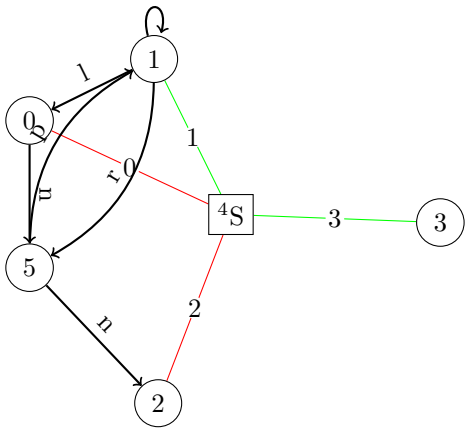


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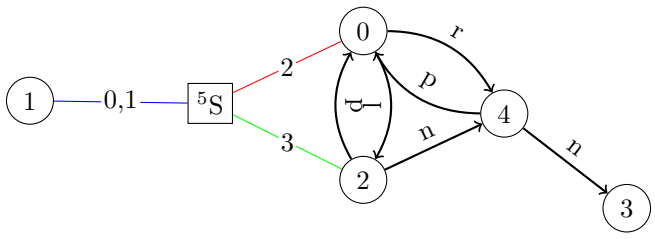
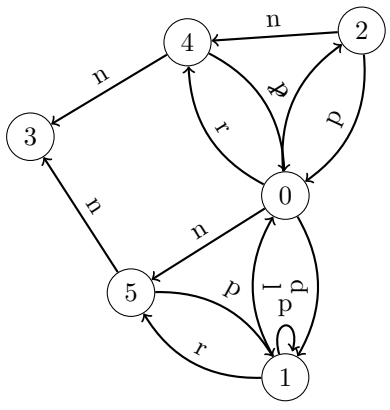
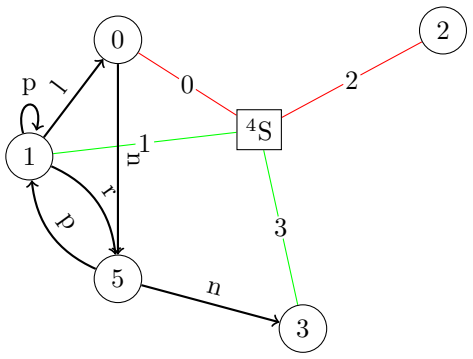
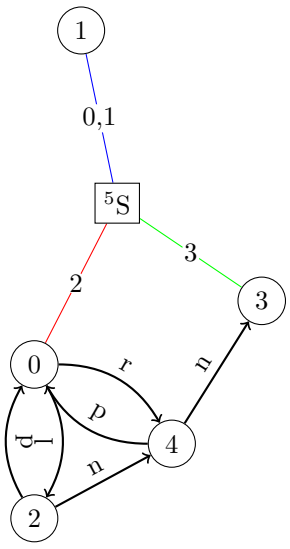


### 1.143 Critical Pair (Not Joinable)




2 2.3

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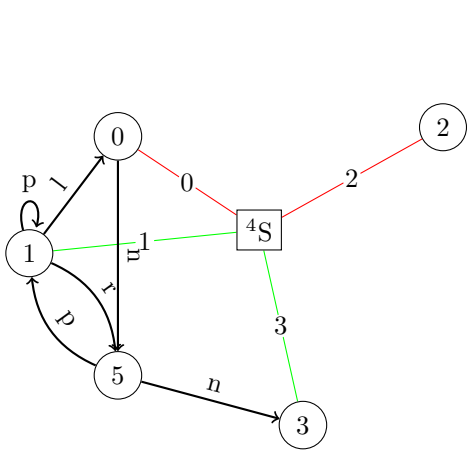


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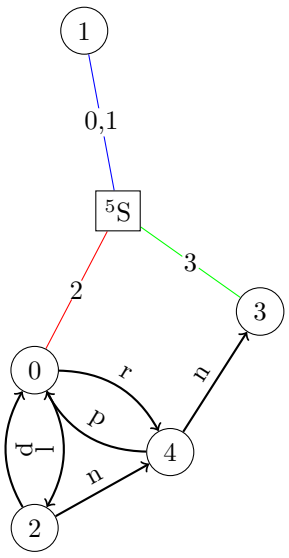
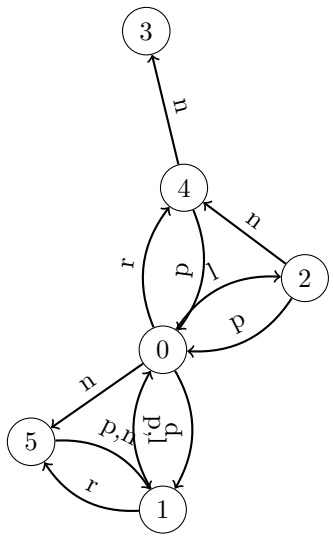
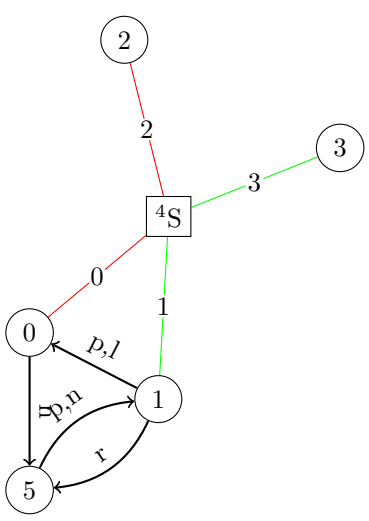
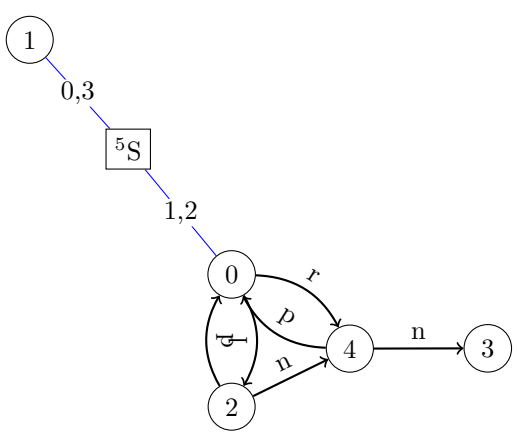


### 1.144 Critical Pair (Not Joinable)




2 2.4

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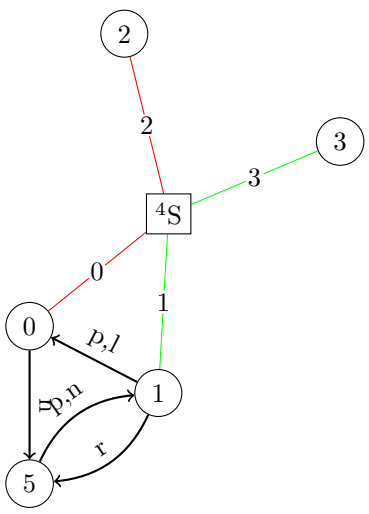


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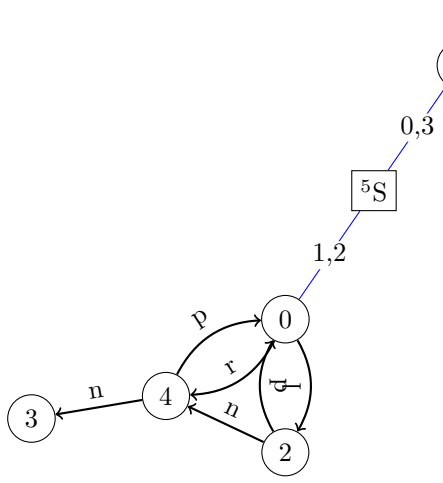
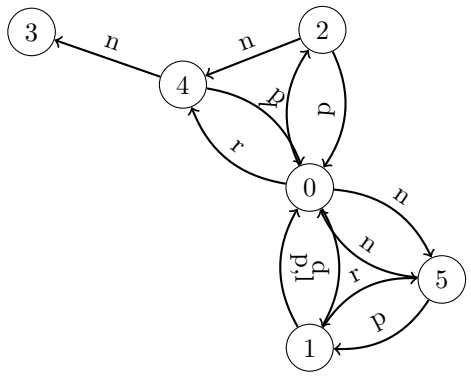
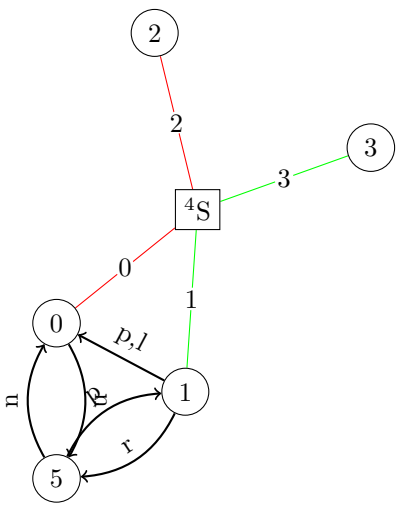
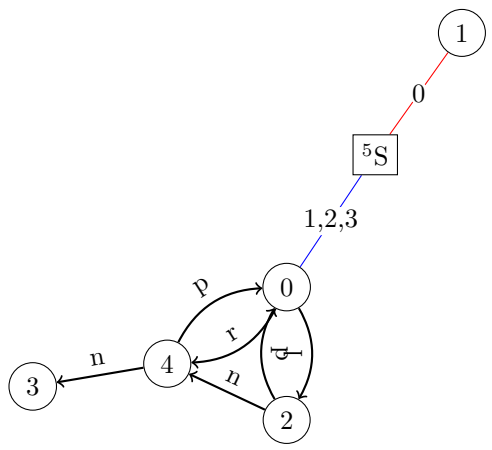


### 1.145 Critical Pair (Not Joinable)

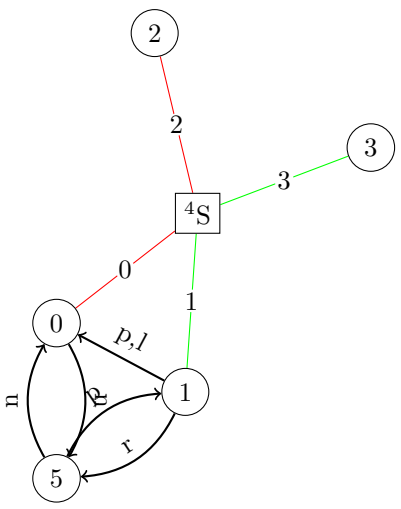



$\overset{2}{\Rightarrow}$ $\overset{2.5}{\Leftarrow}$

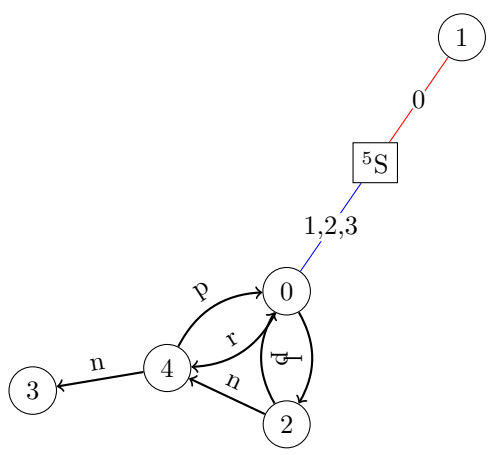


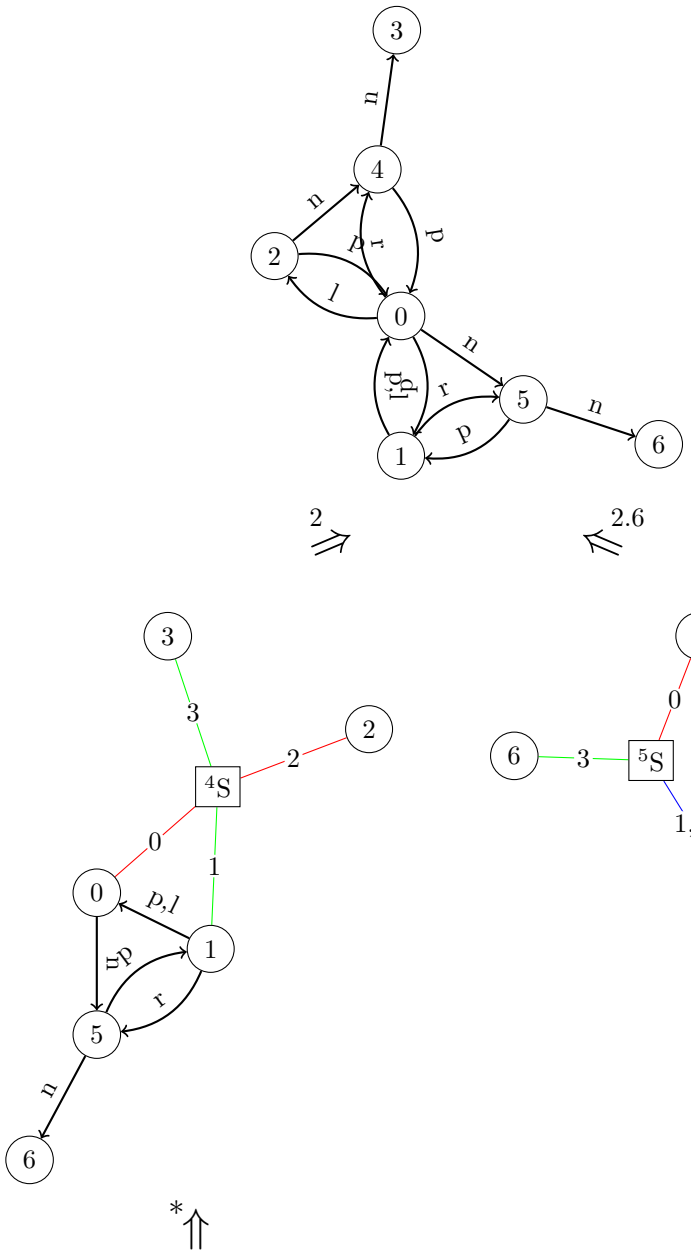

$\overset{*}{\Uparrow}$ $\Uparrow^{*}$

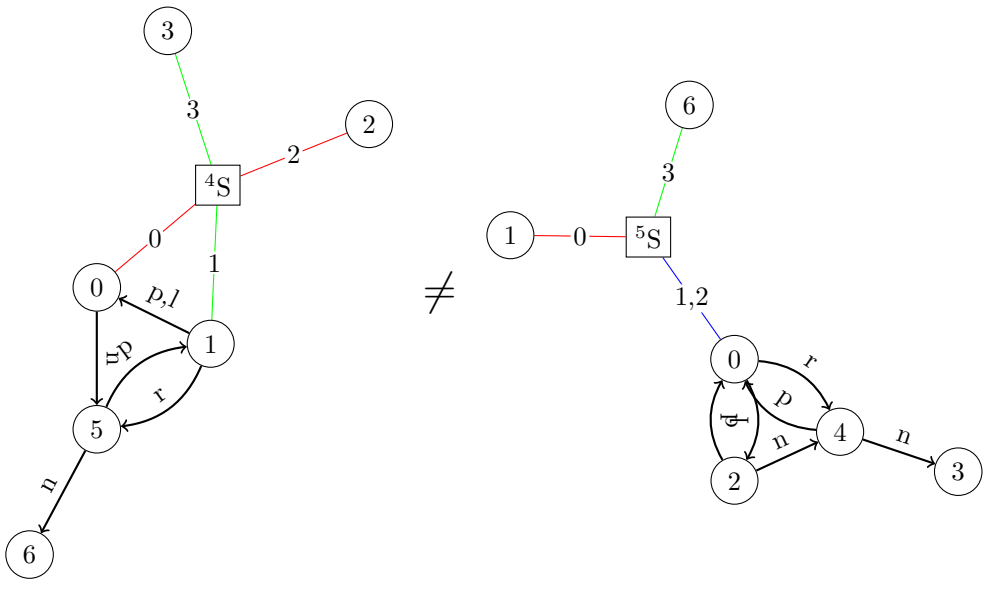



$\neq$

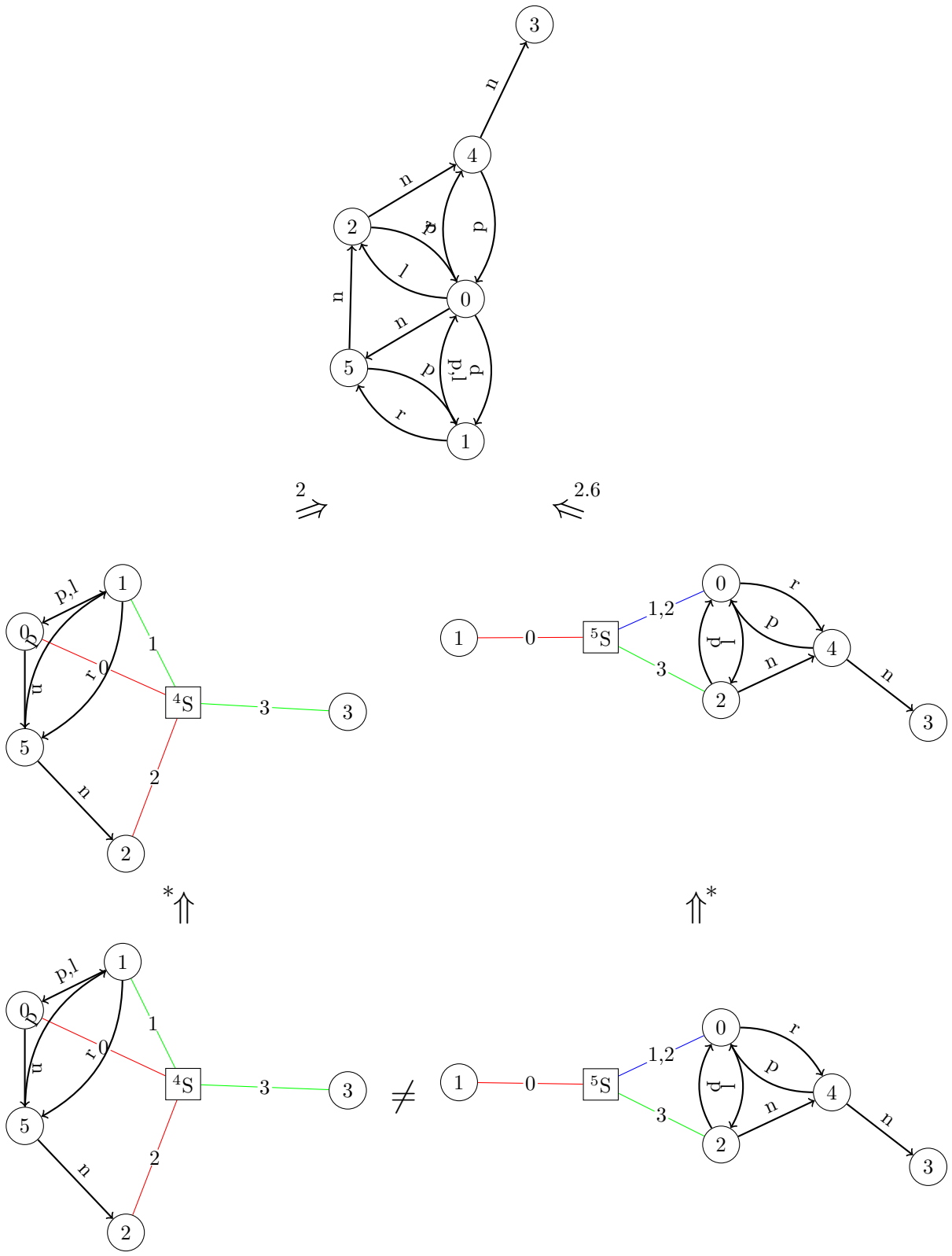


### 1.146 Critical Pair (Not Joinable)

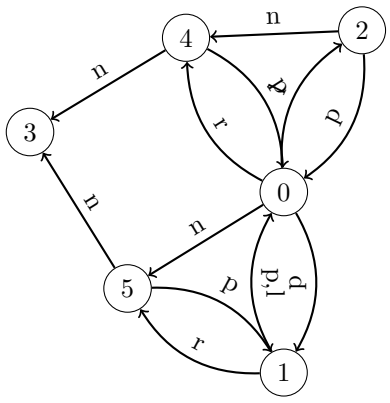


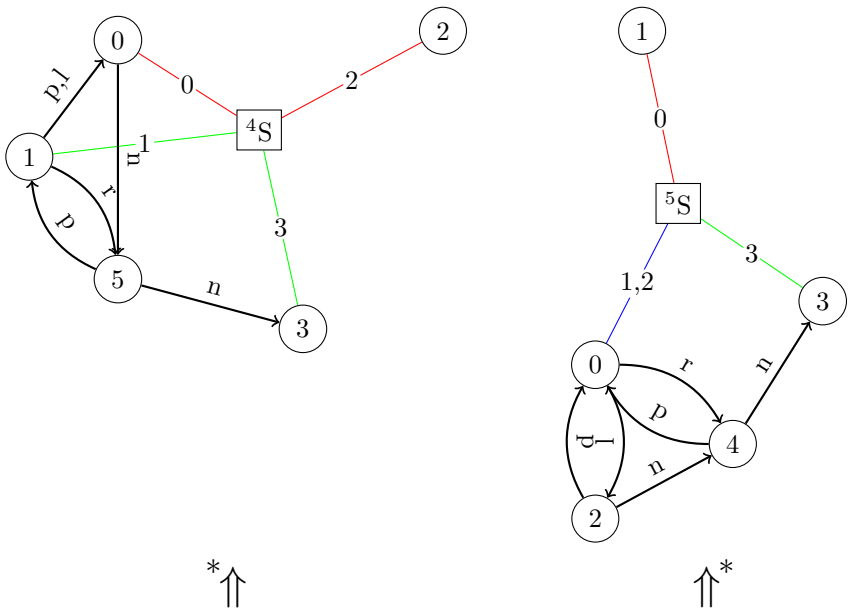
### 1.147 Critical Pair (Not Joinable)



## 1.148 Critical Pair (Not Joinable)




2 2.6

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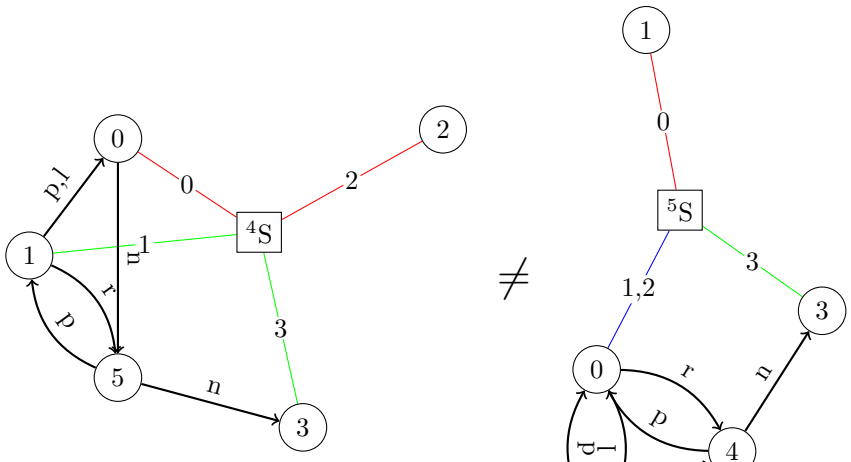


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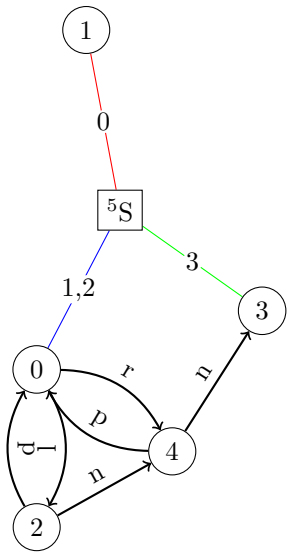
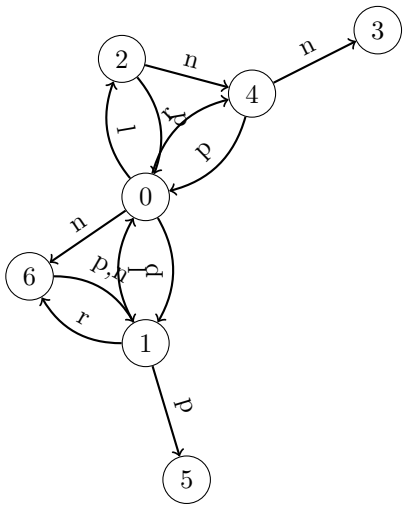
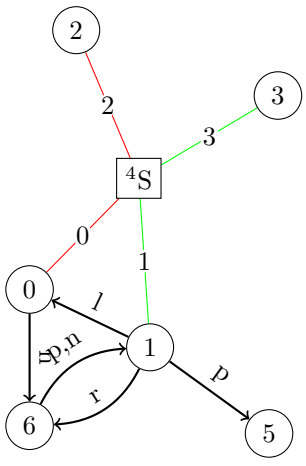
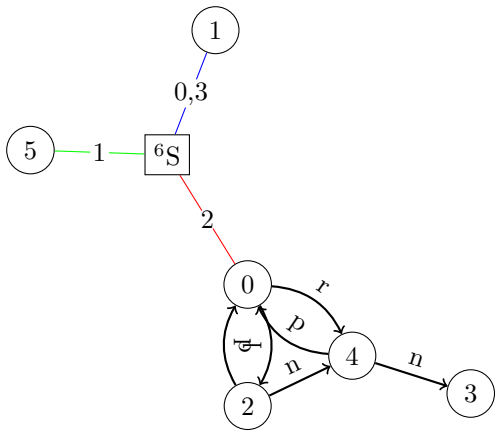


### 1.149 Critical Pair (Not Joinable)




2 ⇗ ⇖ 2.7

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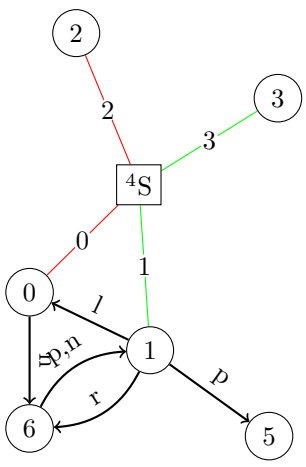


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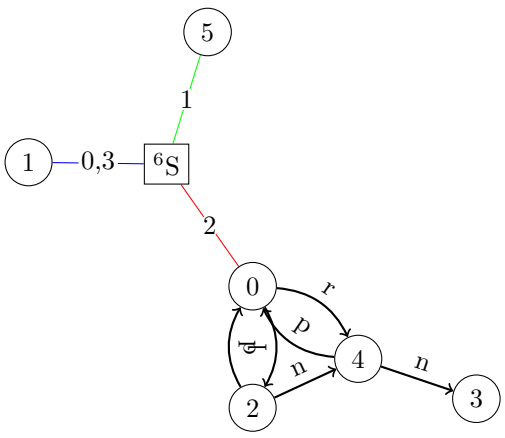
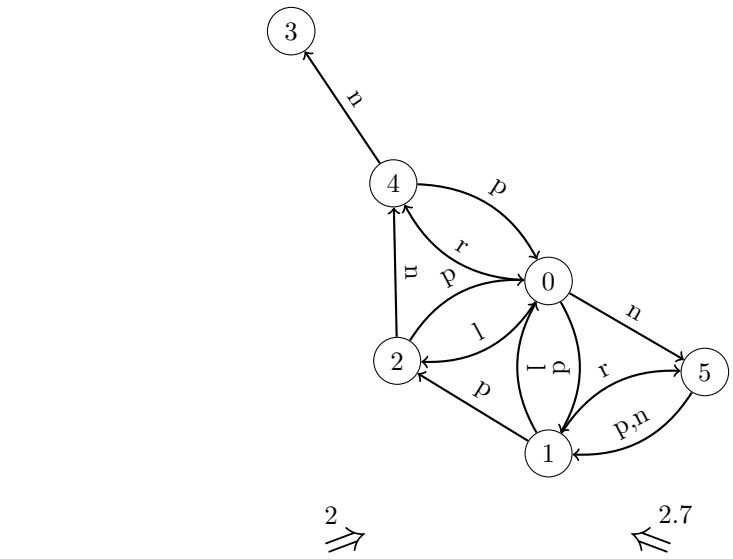
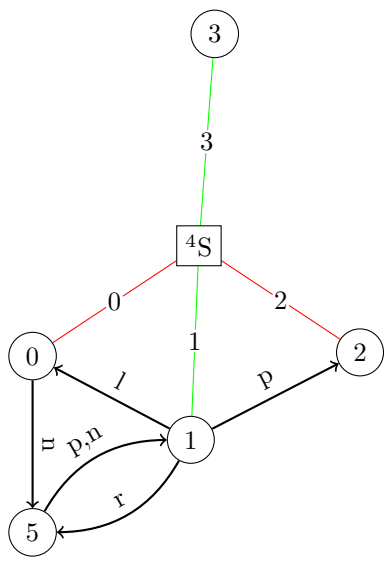
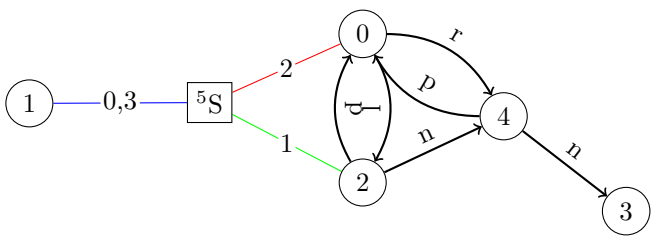


### 1.150 Critical Pair (Not Joinable)




2 ⇗ ⇖ 2.7

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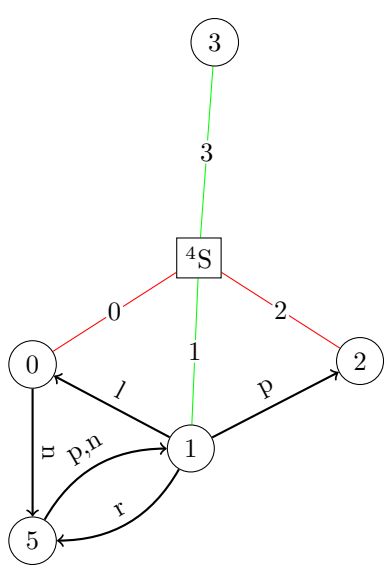


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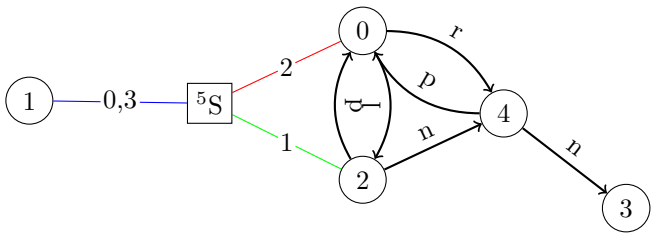
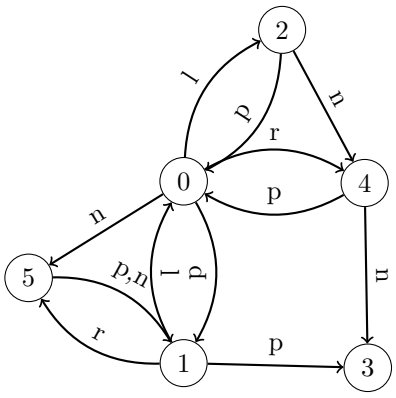
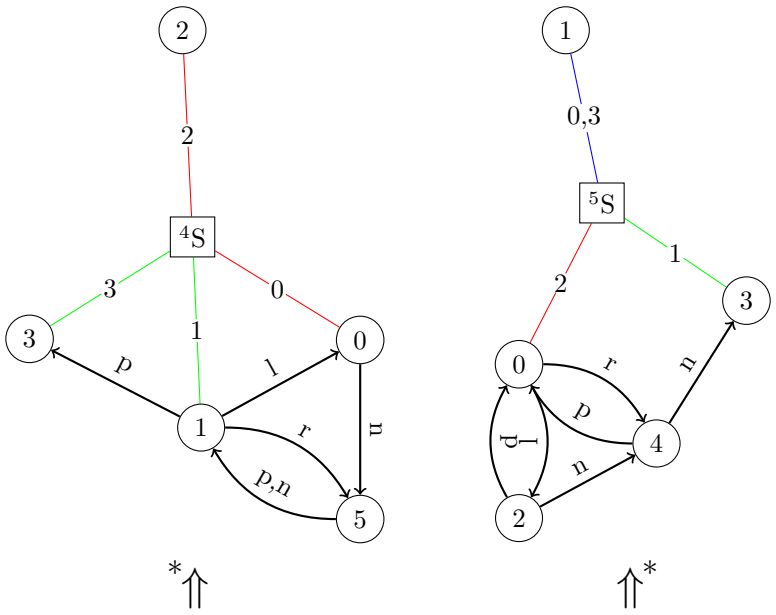


### 1.151 Critical Pair (Not Joinable)




2 2.7

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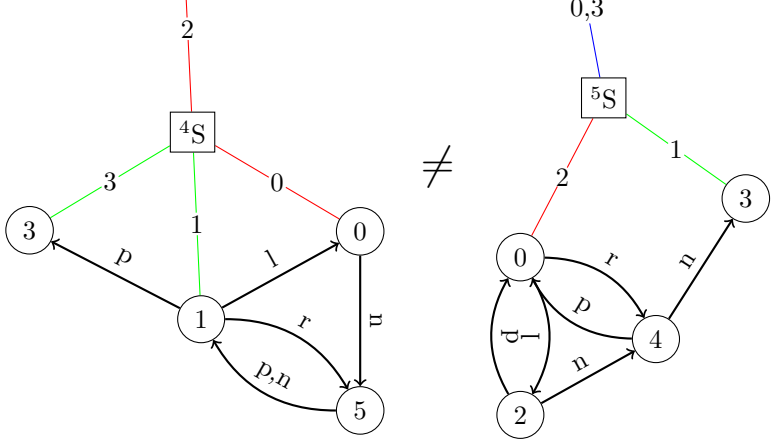


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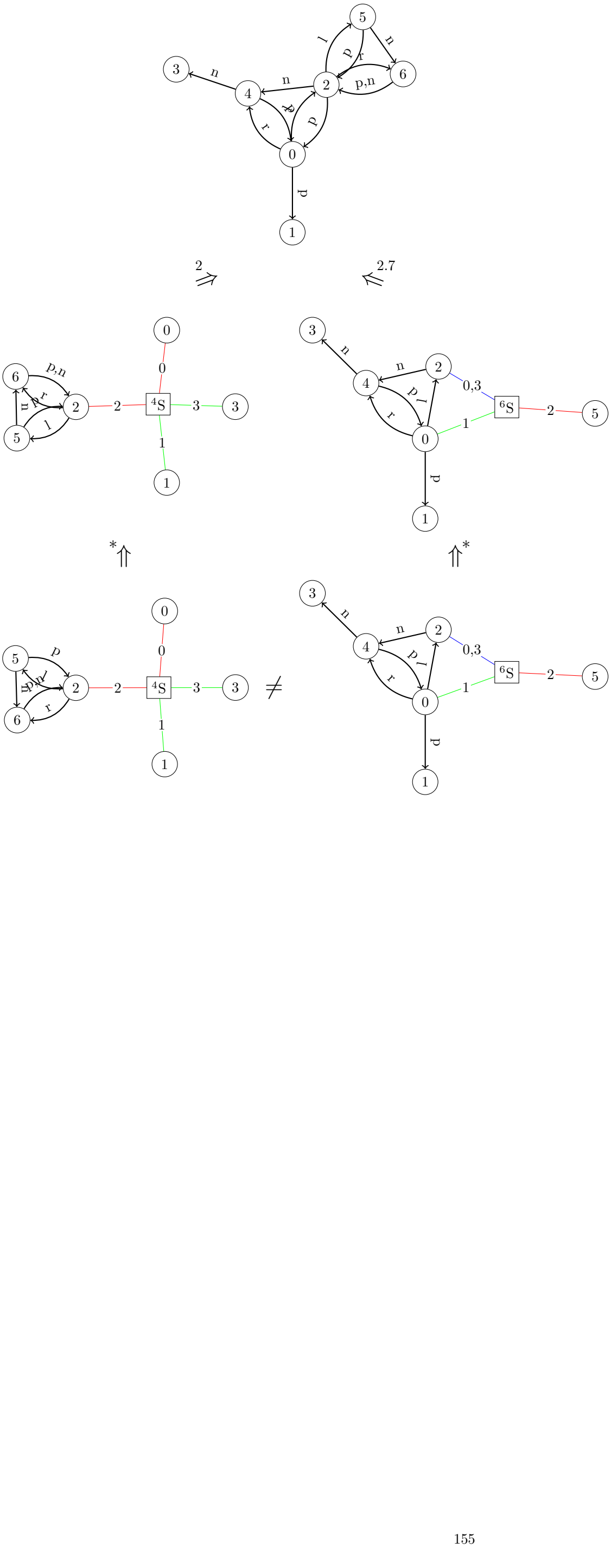
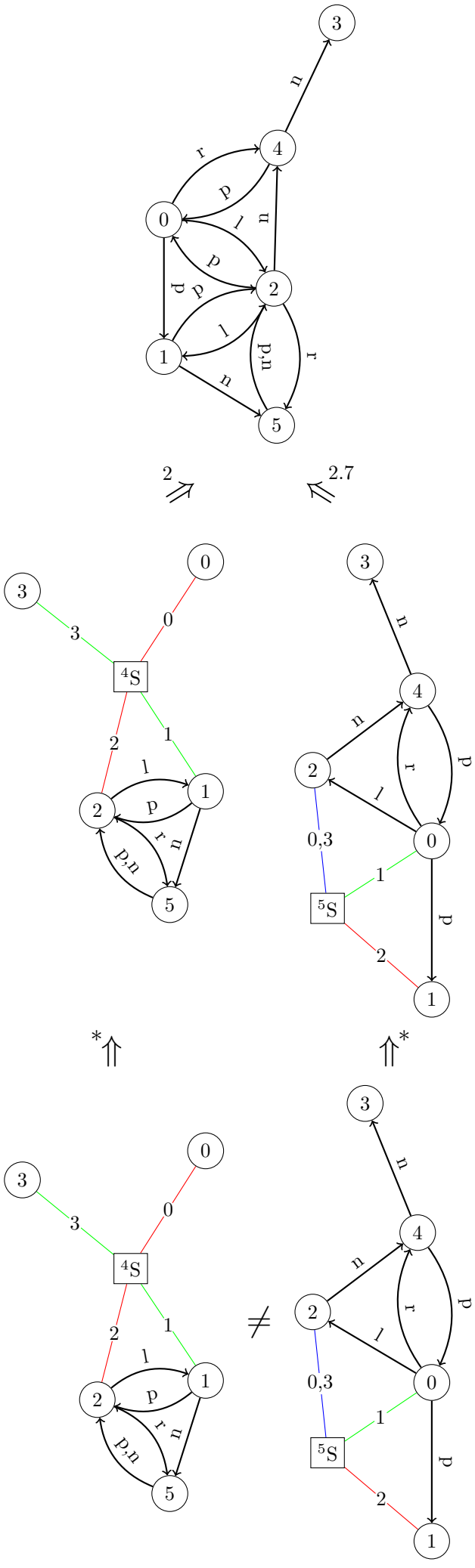
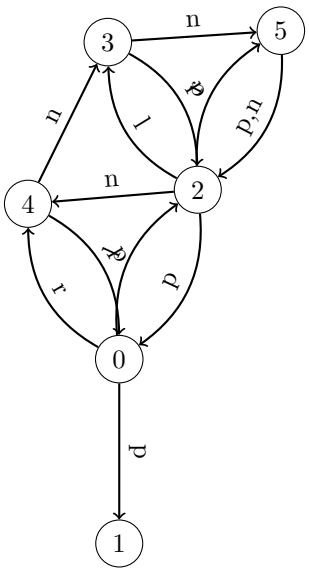
### 1.152 Critical Pair (Not Joinable)



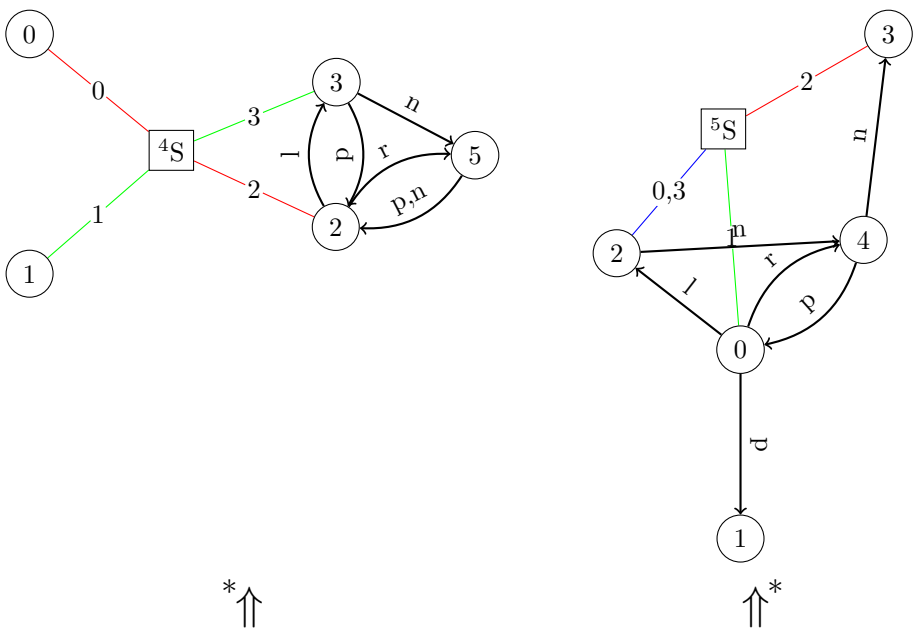
### 1.153 Critical Pair (Not Joinable)

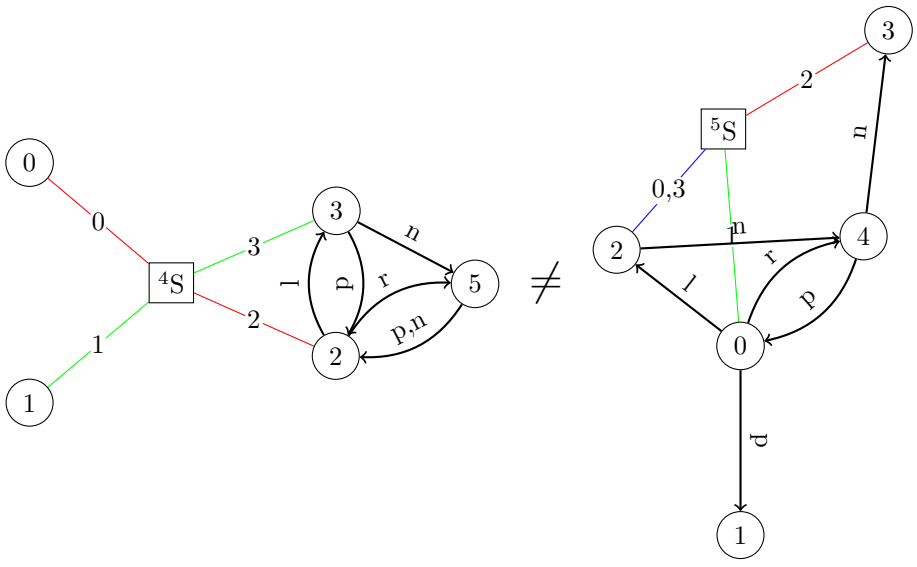


### 1.154 Critical Pair (Not Joinable)

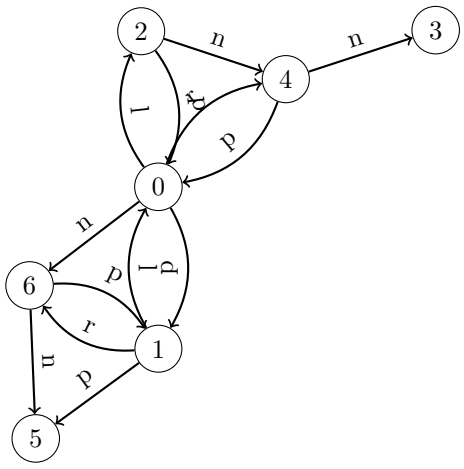



2 2.7

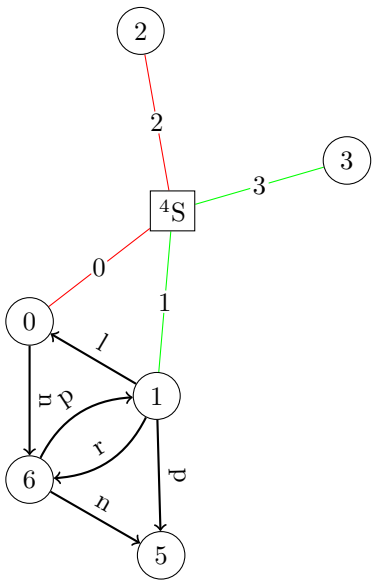


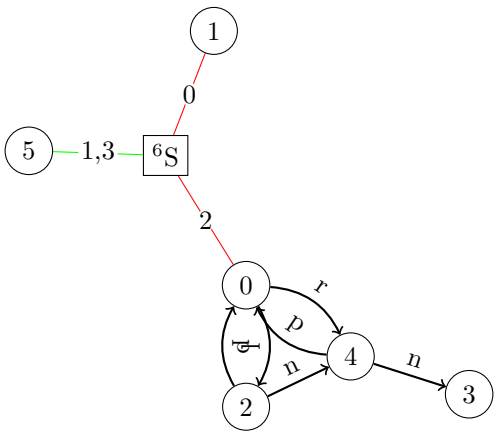



### 1.155 Critical Pair (Not Joinable)




2 ⇛ 2.8 ⇚

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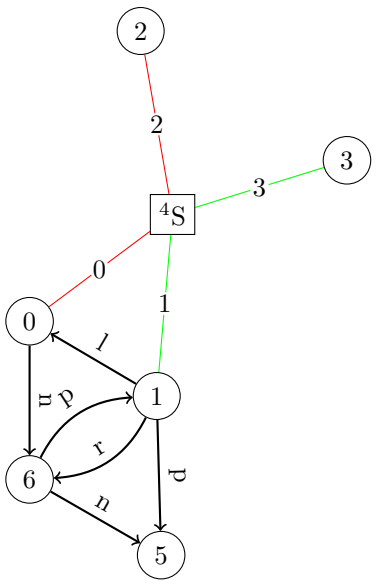


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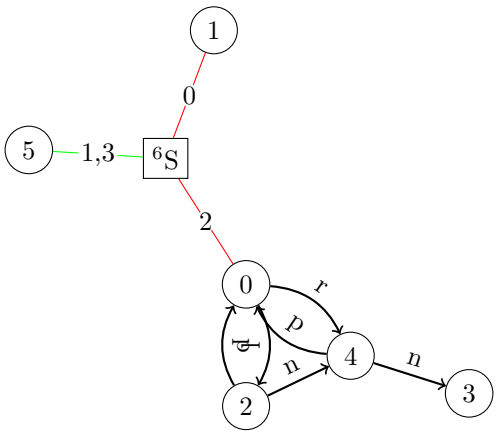
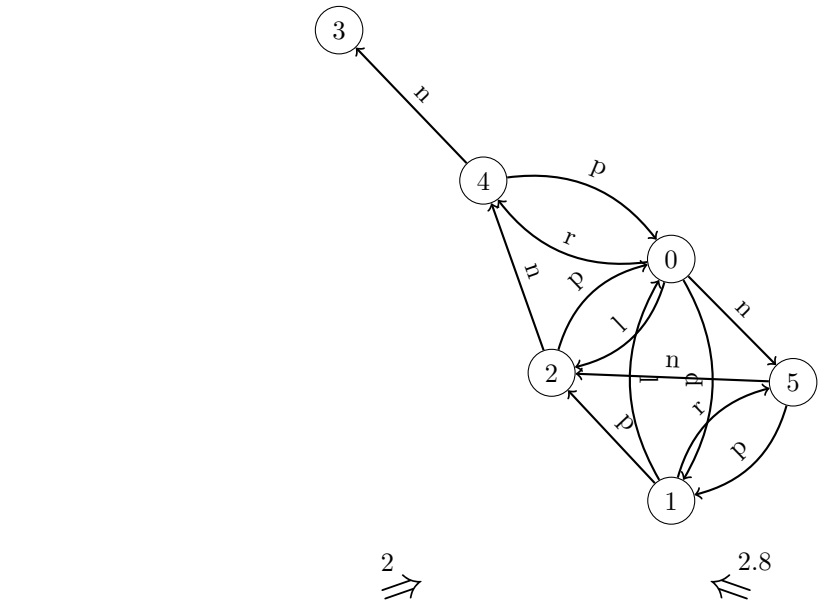
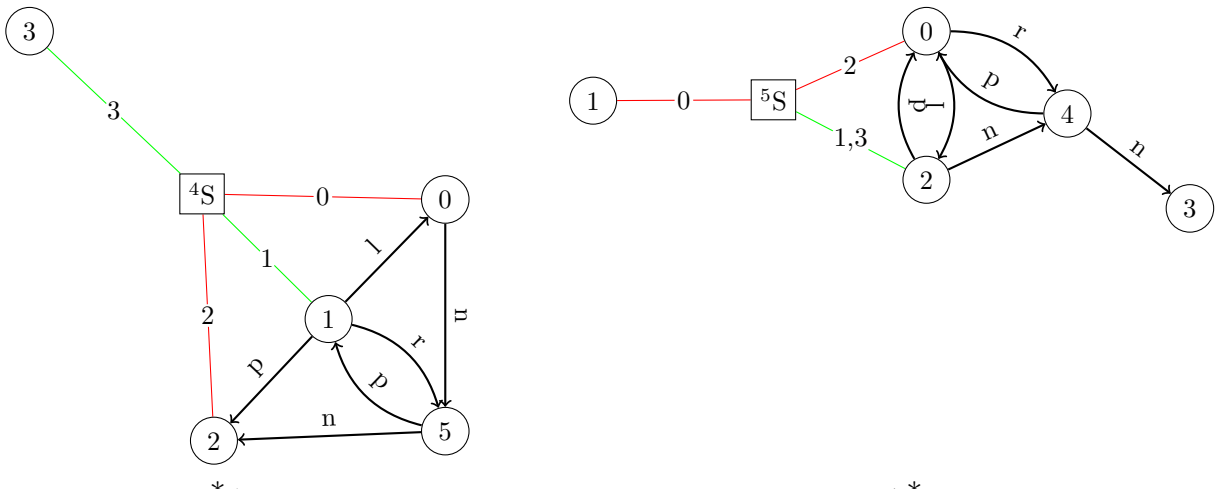


## 1.156 Critical Pair (Not Joinable)




2 2.8

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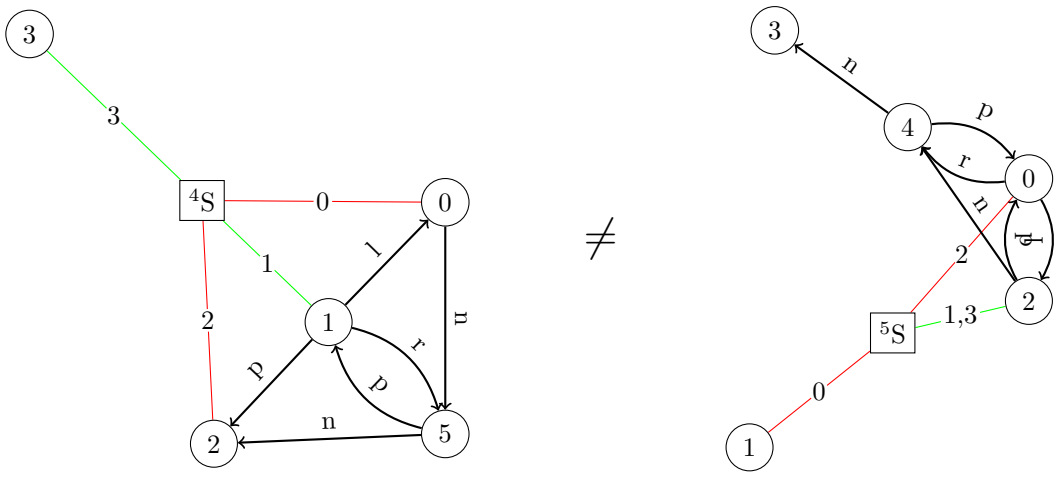
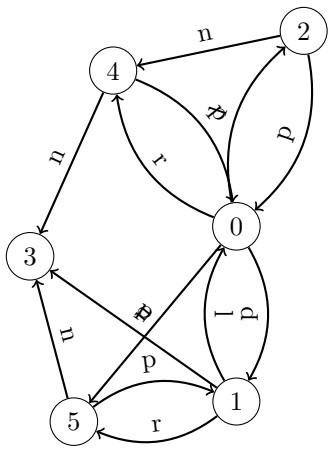
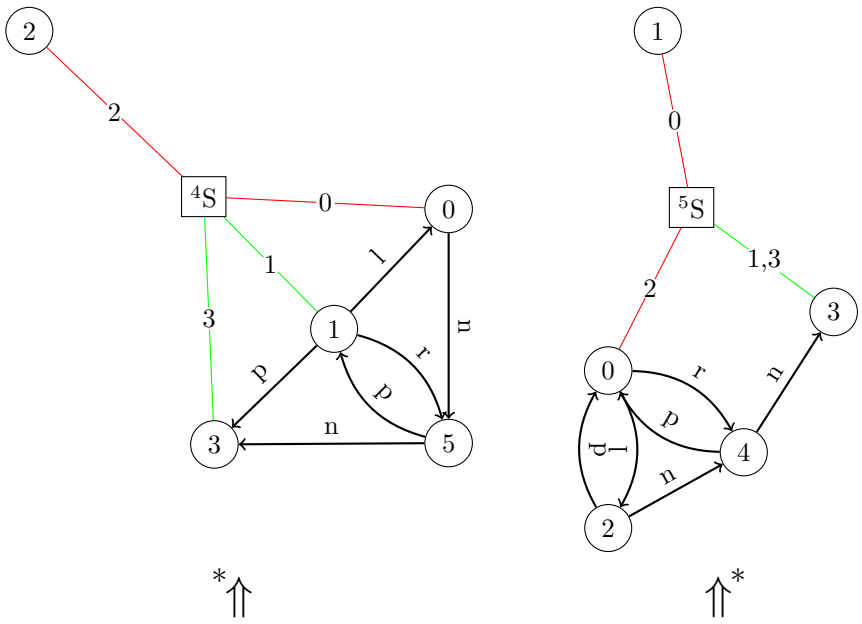


### 1.157 Critical Pair (Not Joinable)




2 2.8

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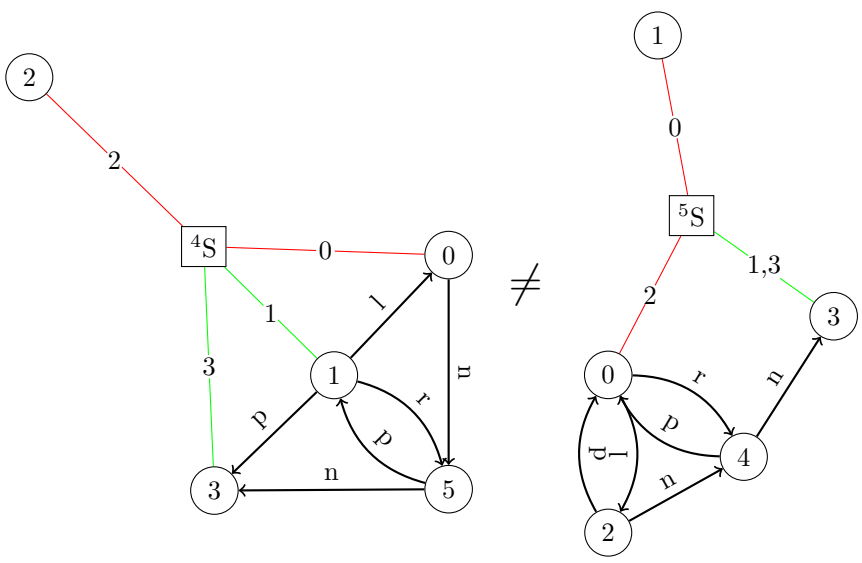
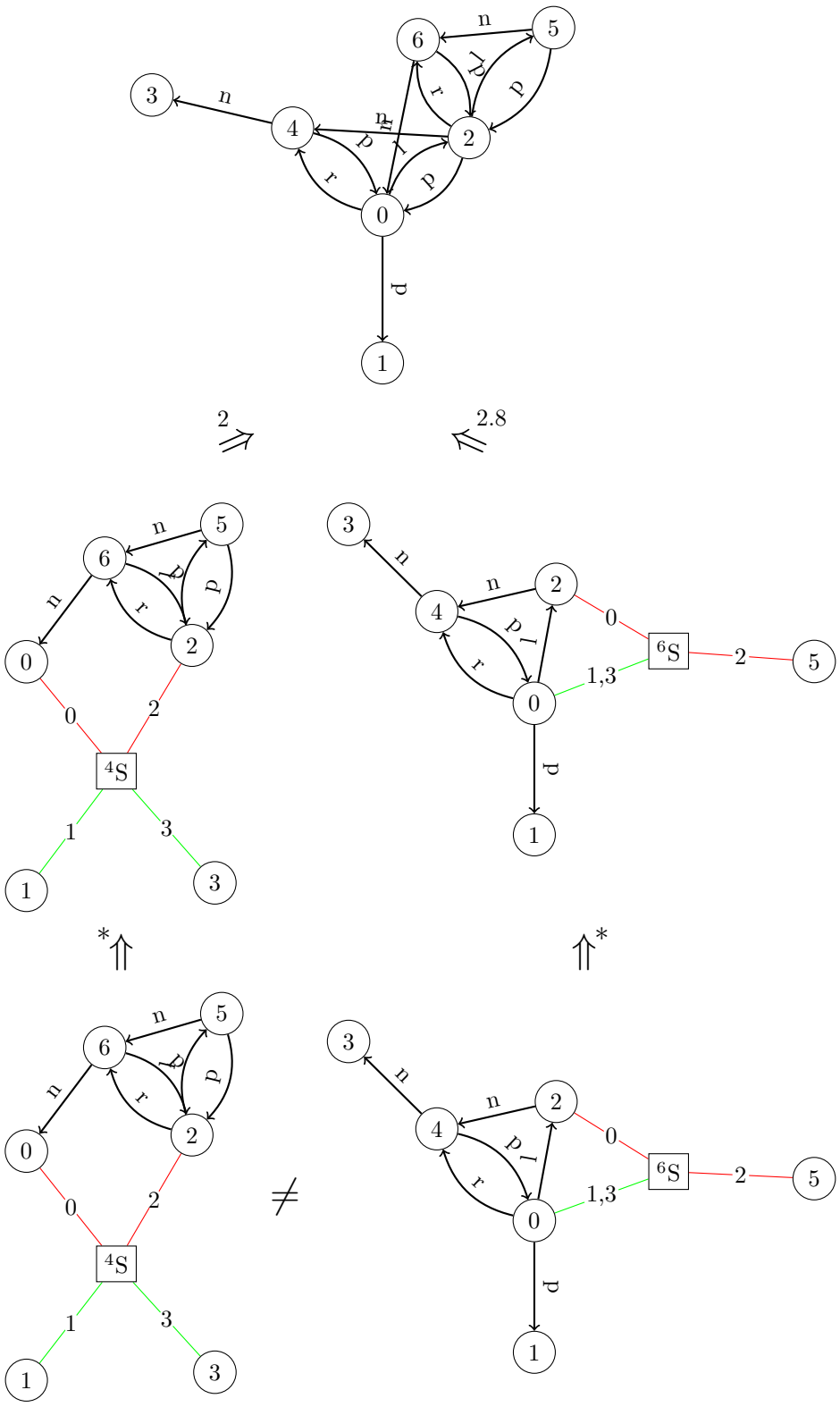


### 1.158 Critical Pair (Not Joinable)



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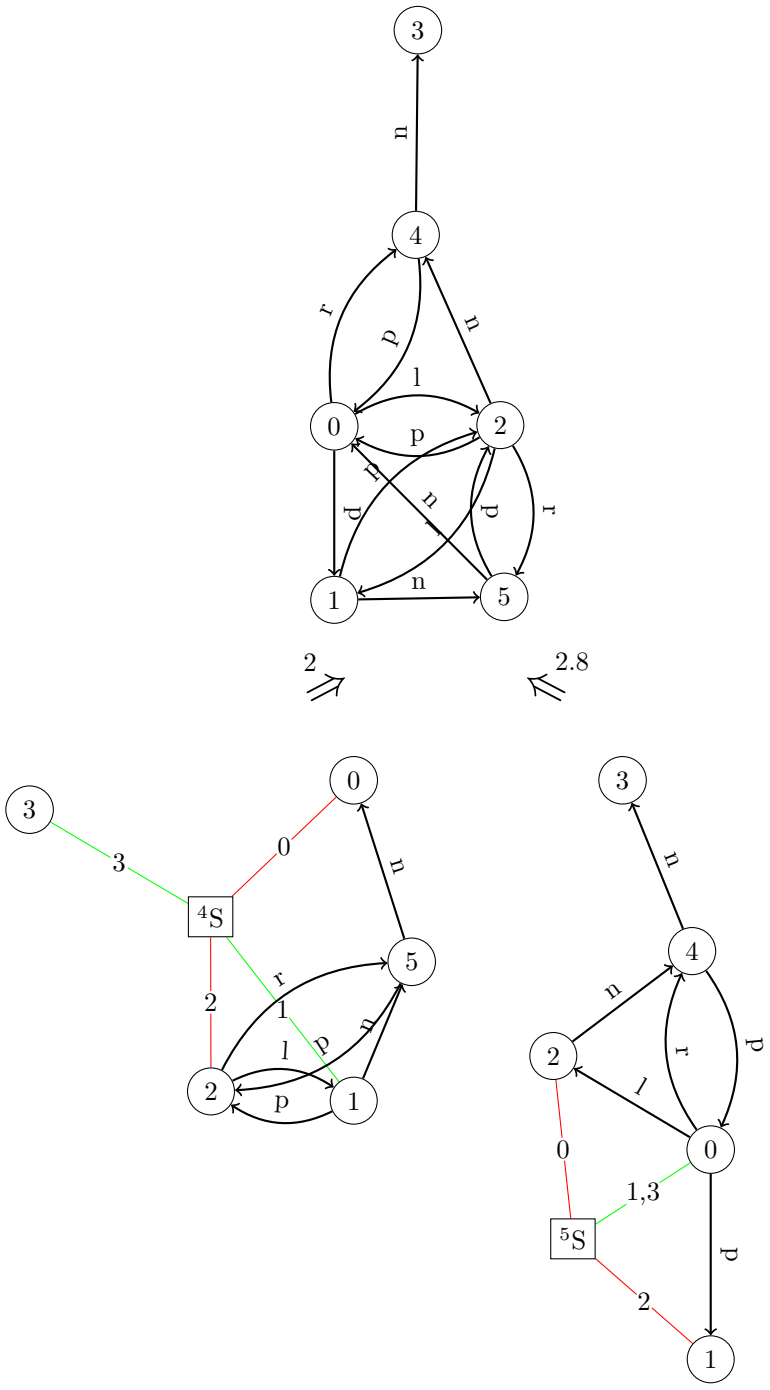


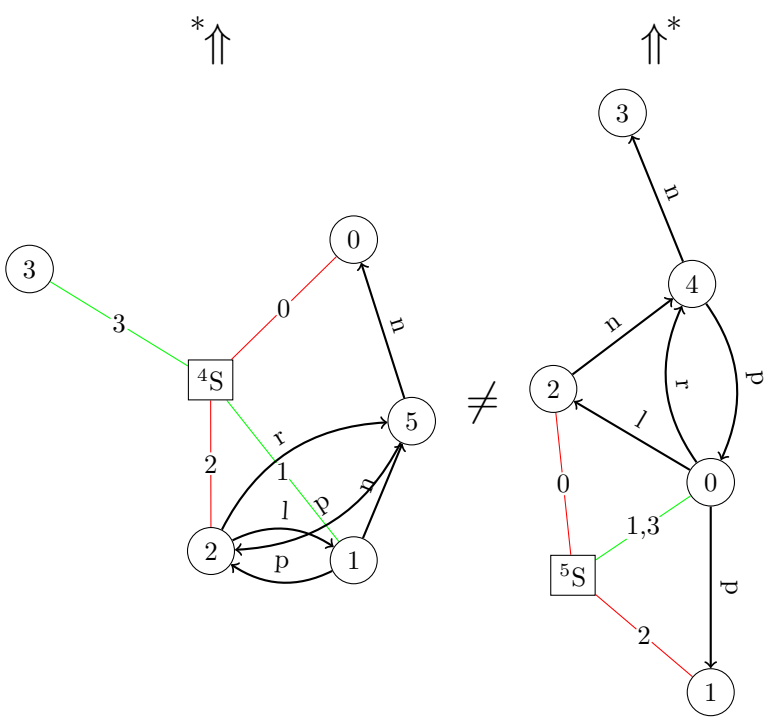

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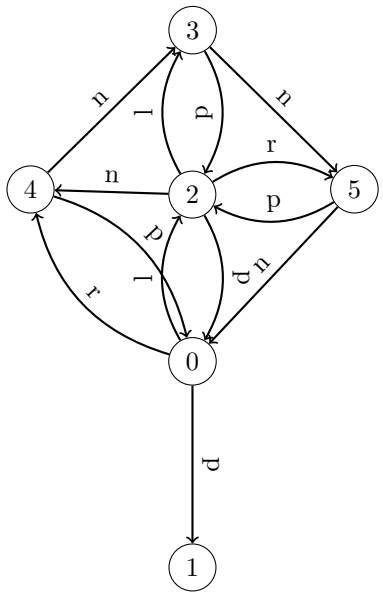
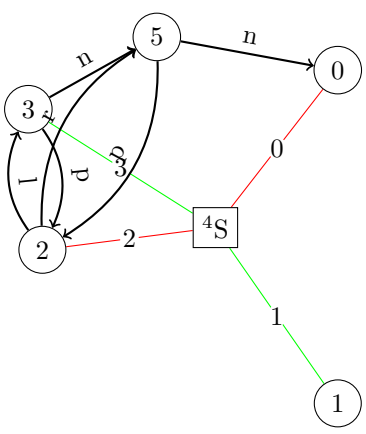
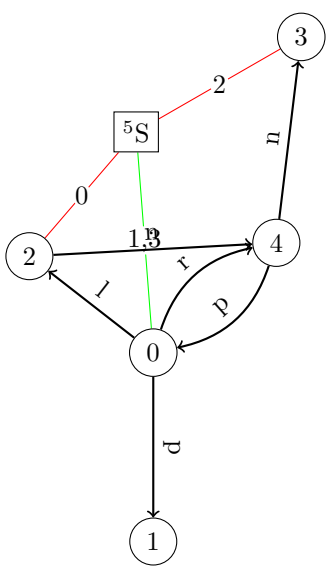



2 2.8

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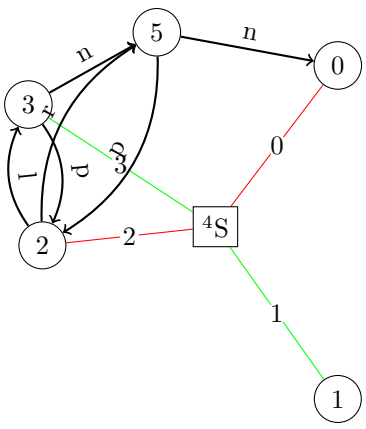


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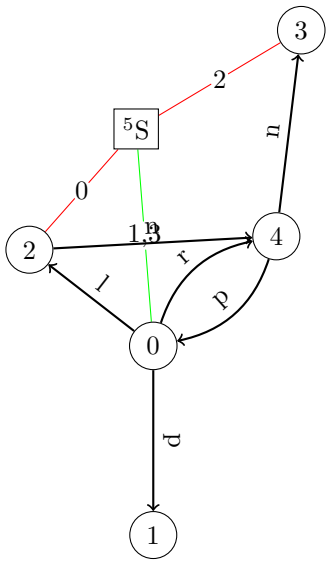
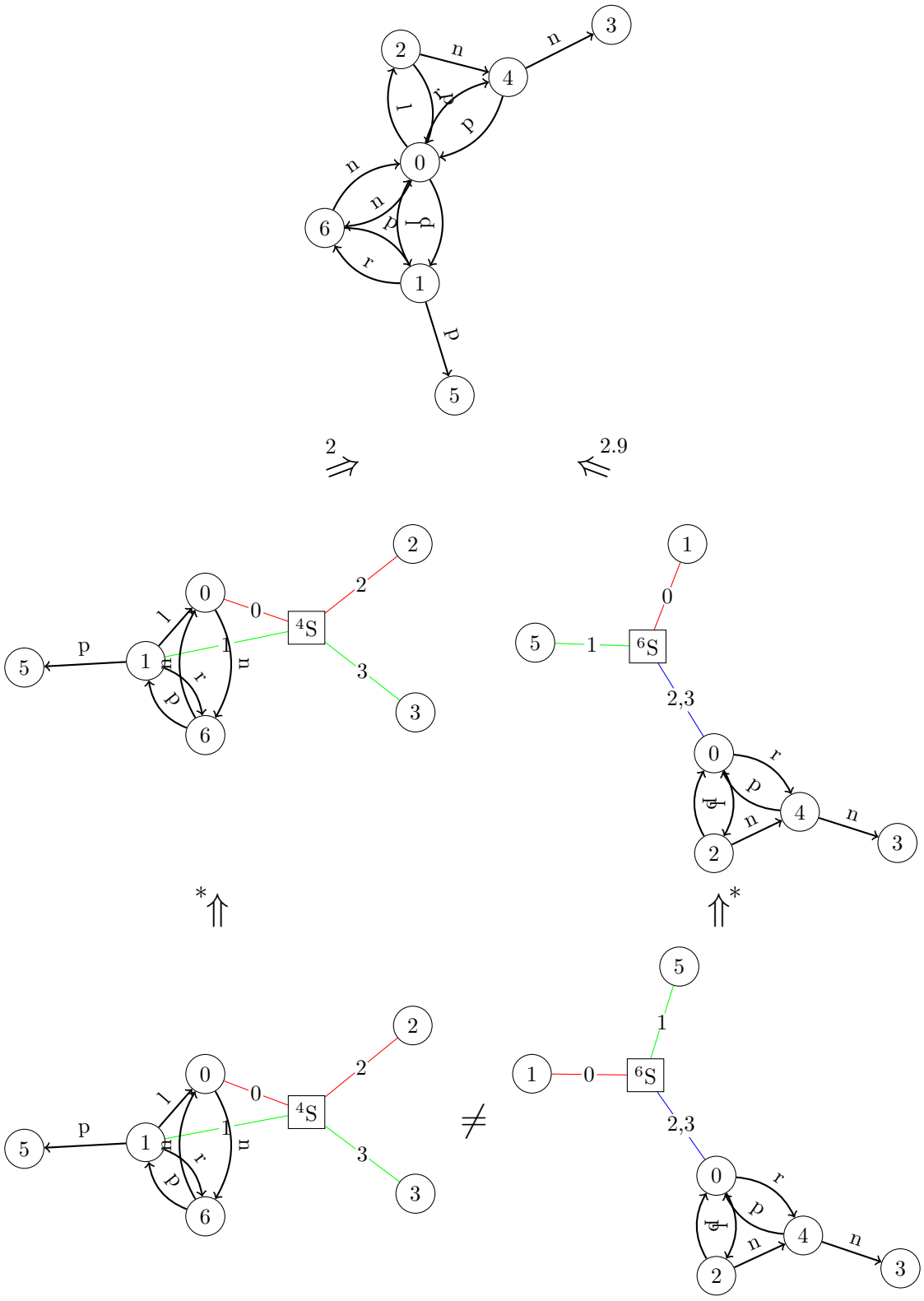
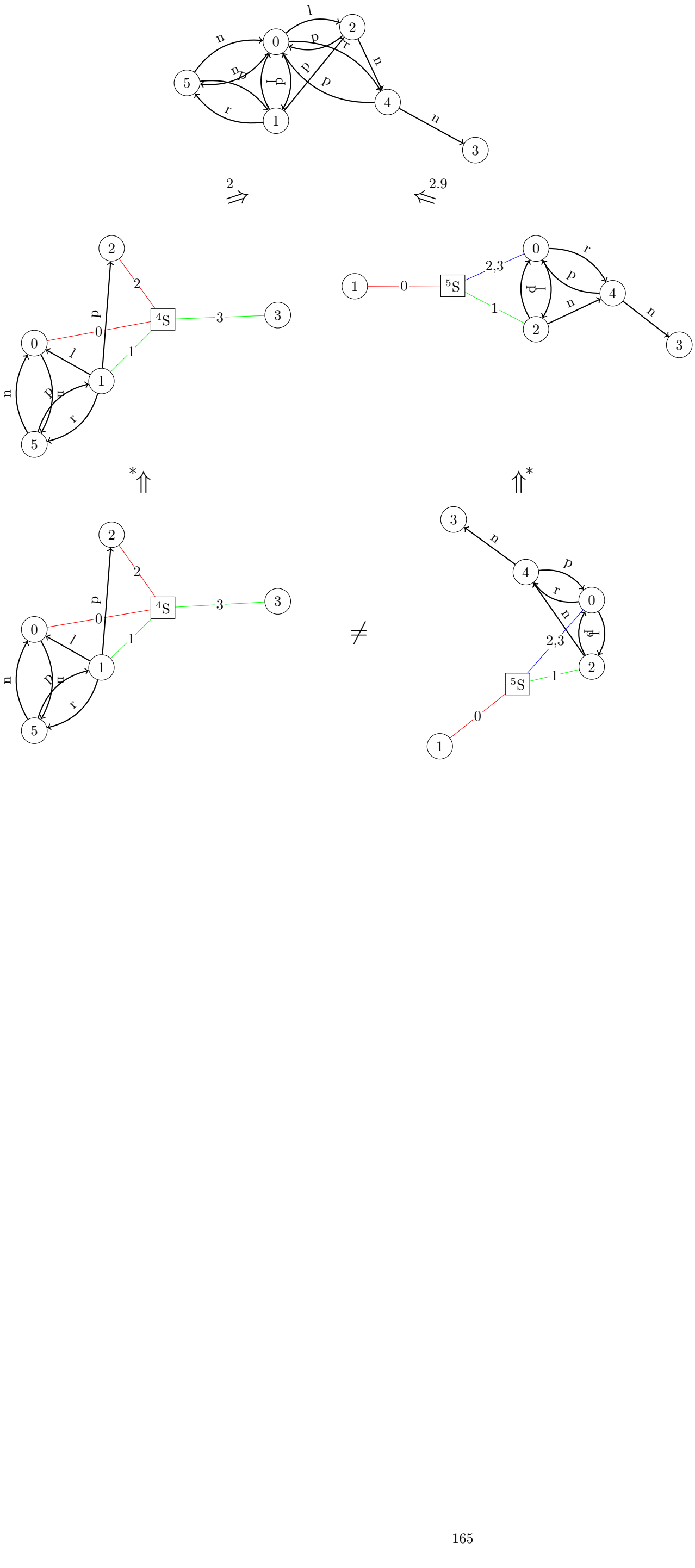


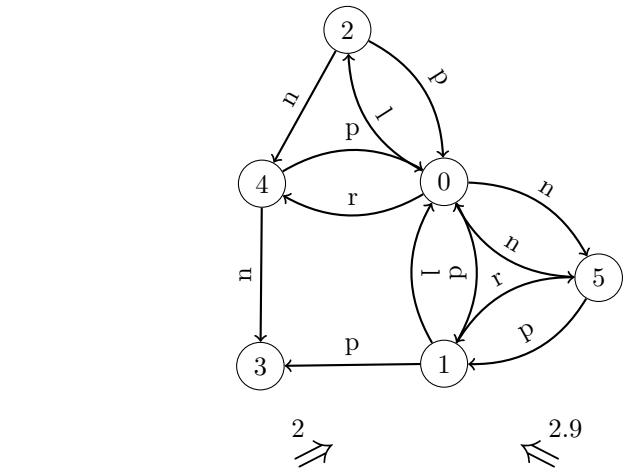
### 1.161 Critical Pair (Not Joinable)



### 1.162 Critical Pair (Not Joinable)



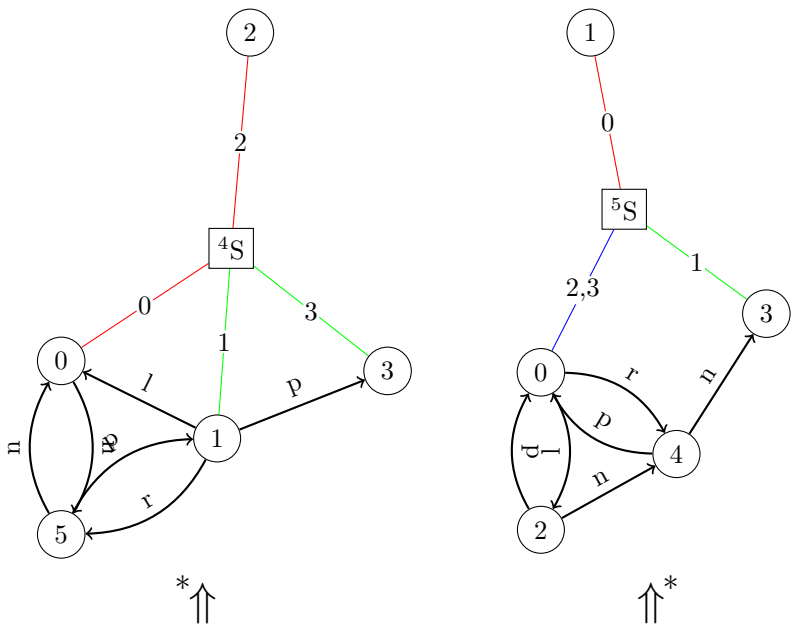
### 1.163 Critical Pair (Not Joinable)

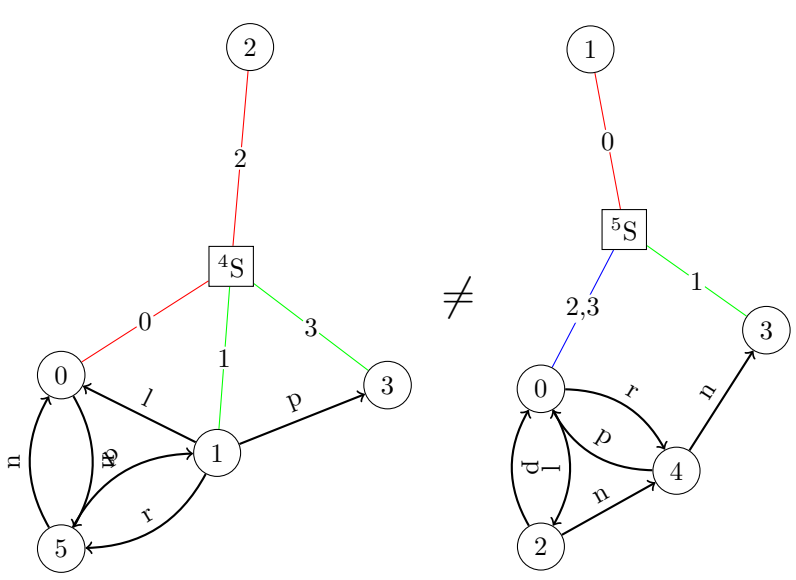








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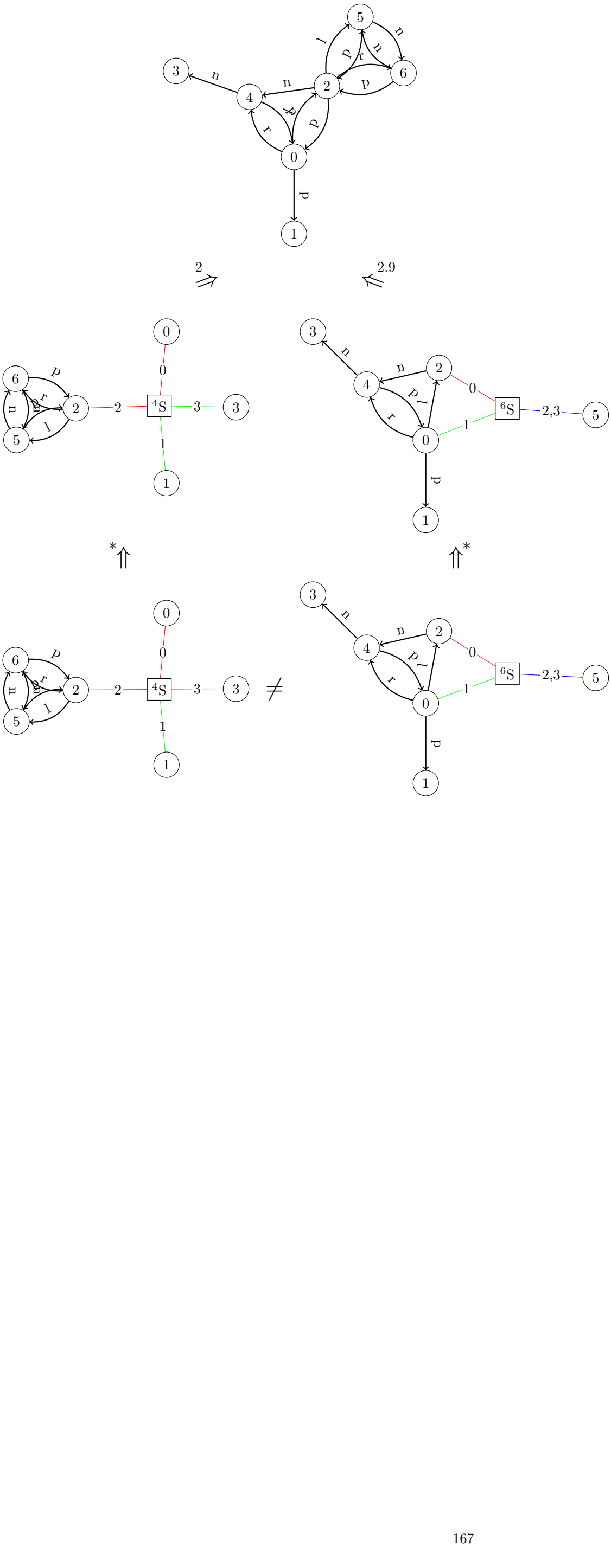
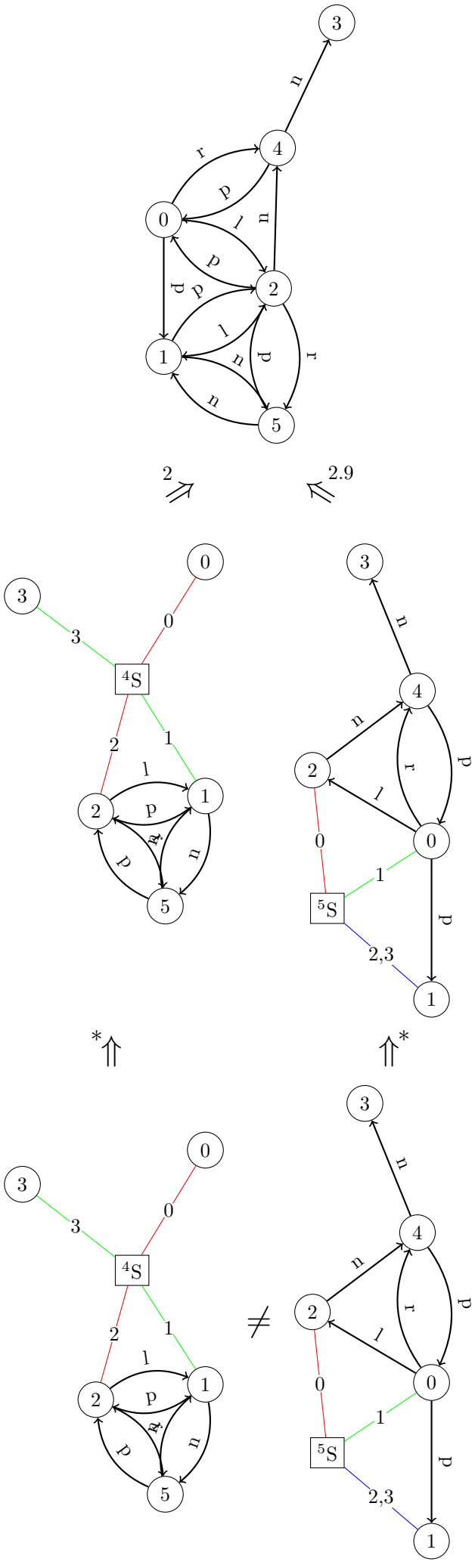


### 1.165 Critical Pair (Not Joinable)



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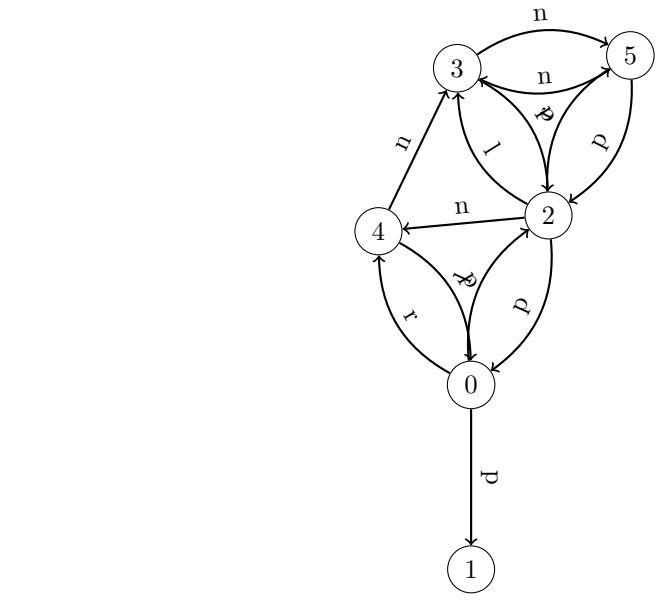
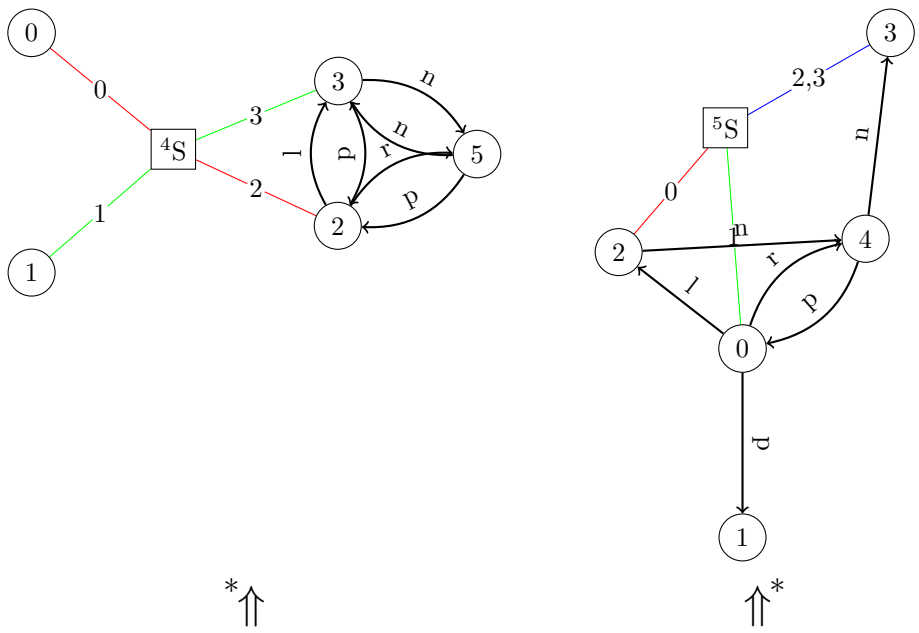
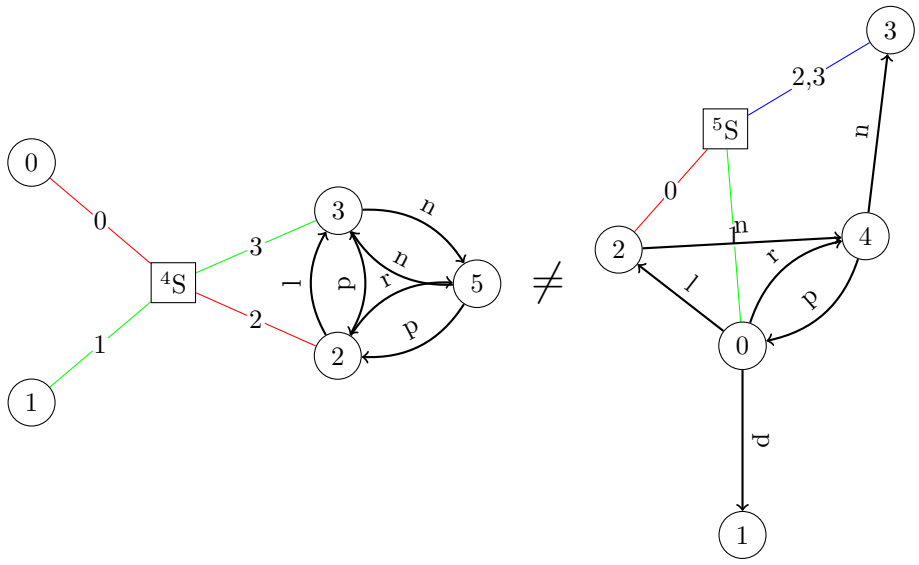



2 2.9



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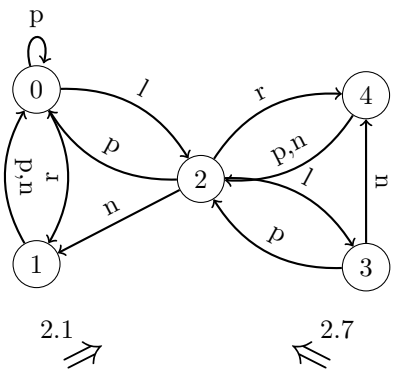
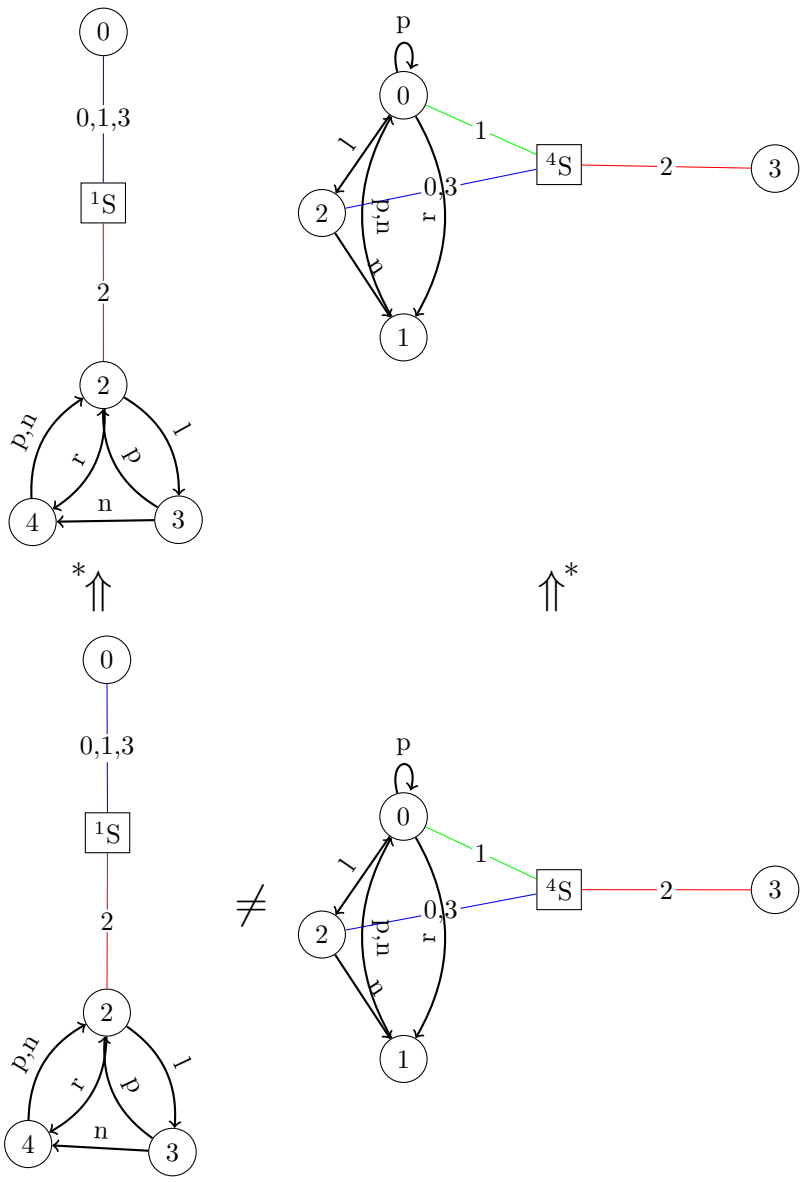
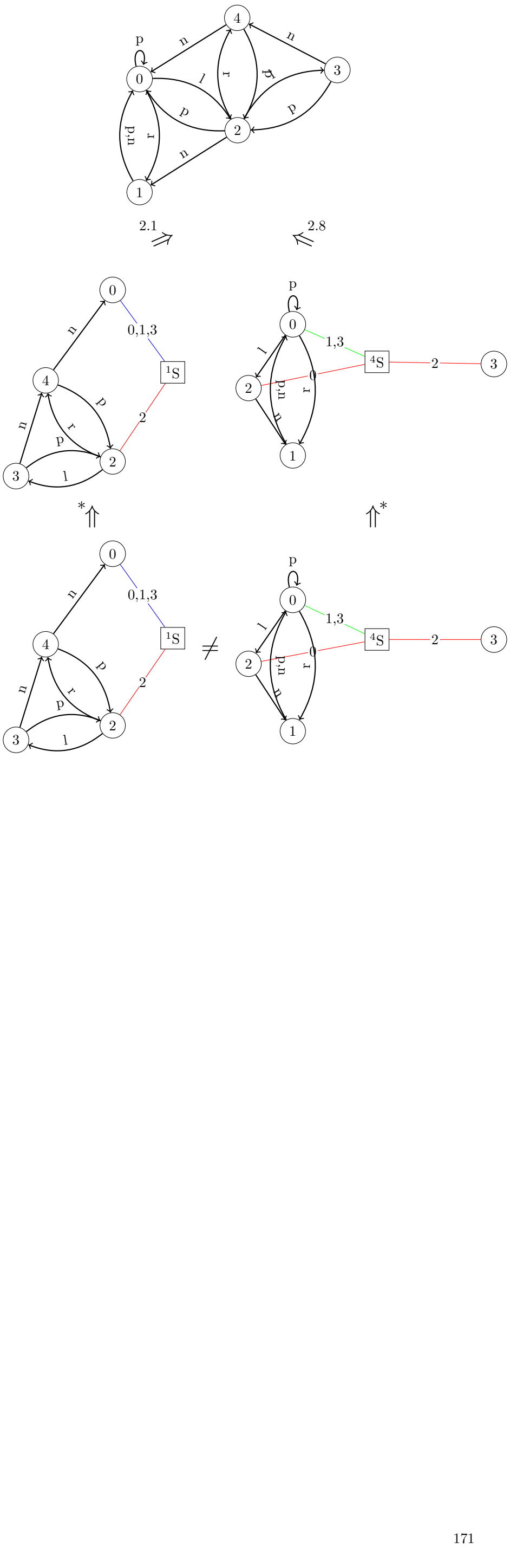


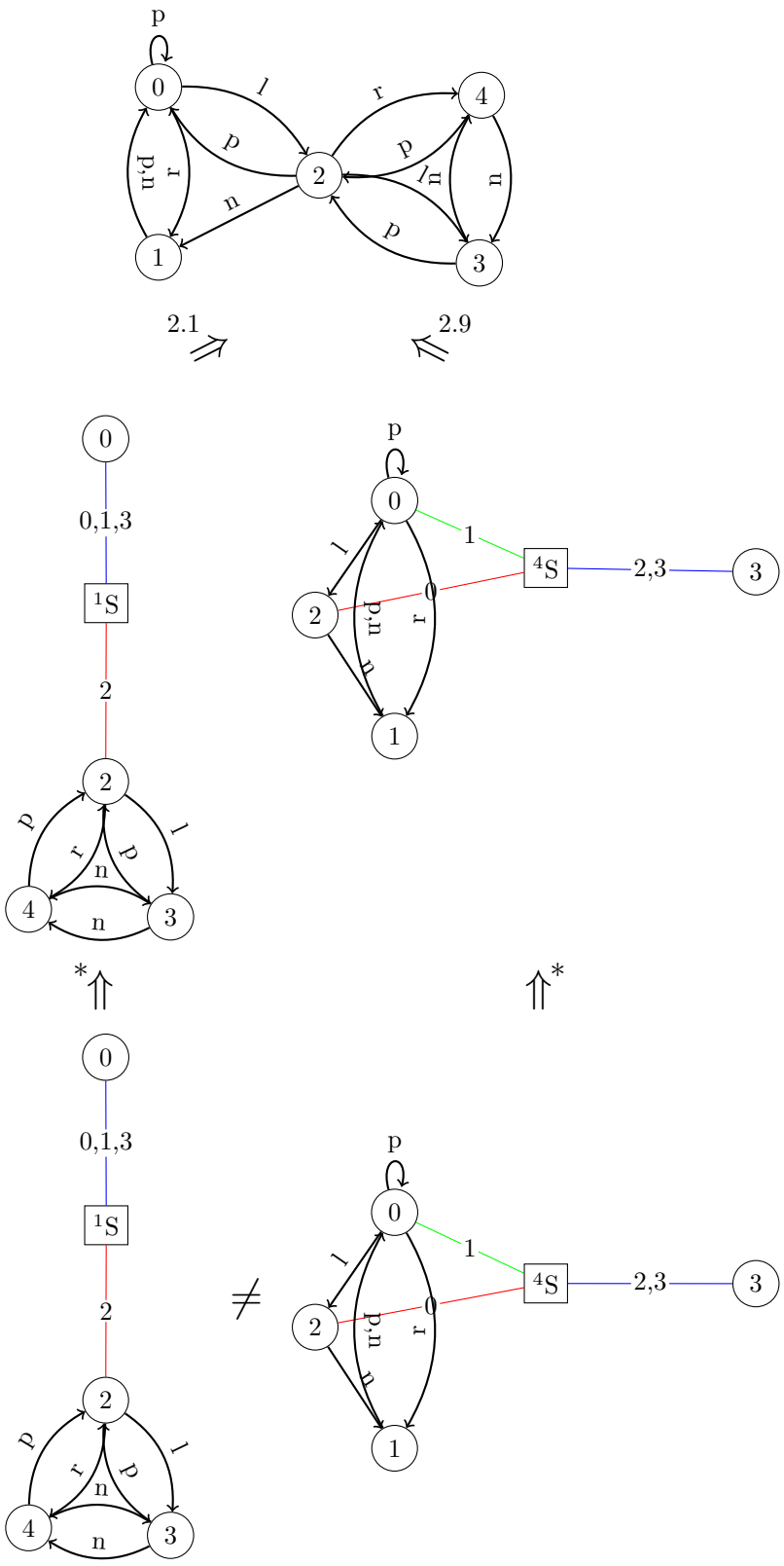

2.1 ⇉ 2.7



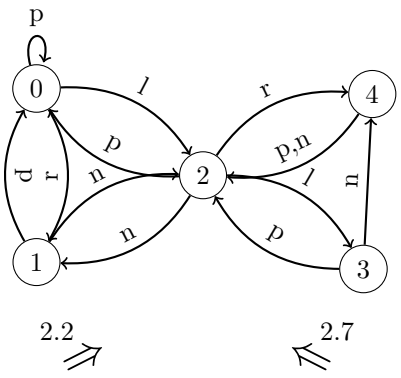
## 1.168 Critical Pair (Not Joinable)



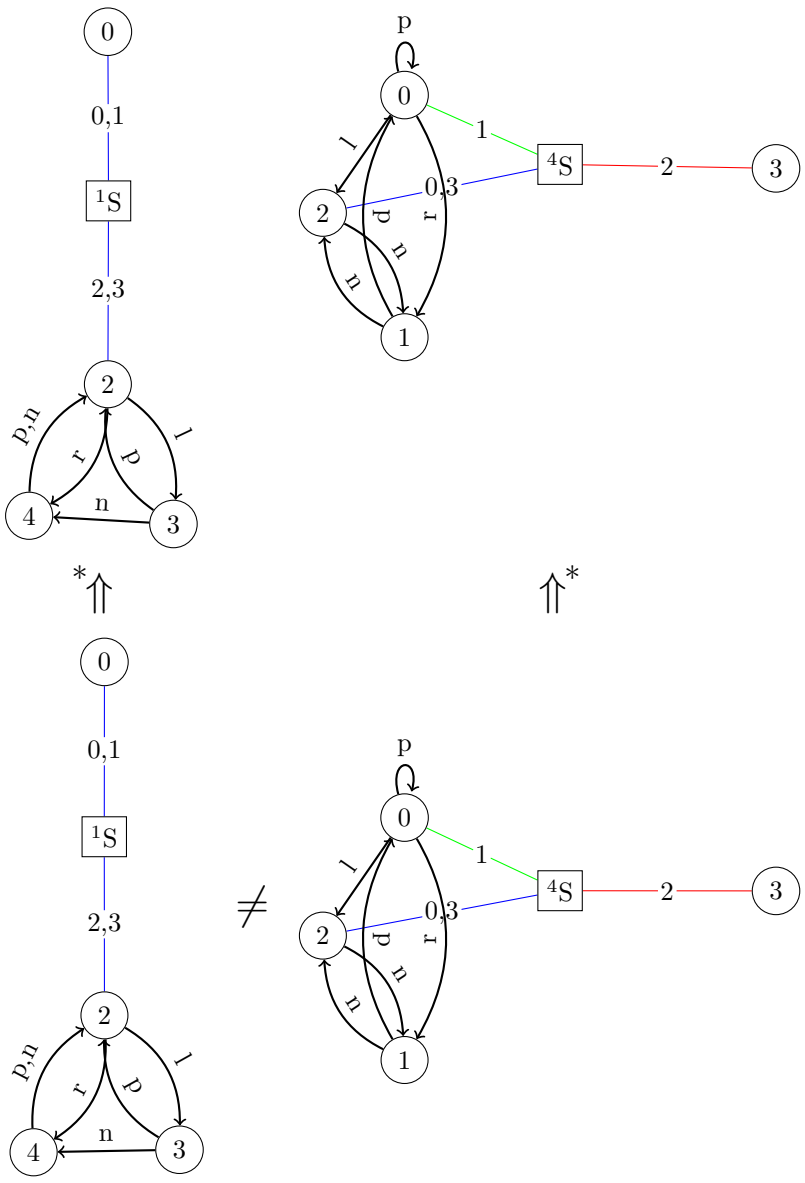
### 1.169 Critical Pair (Not Joinable)



### 1.170 Critical Pair (Not Joinable)




2.2 ⇛ 2.7 ⇚



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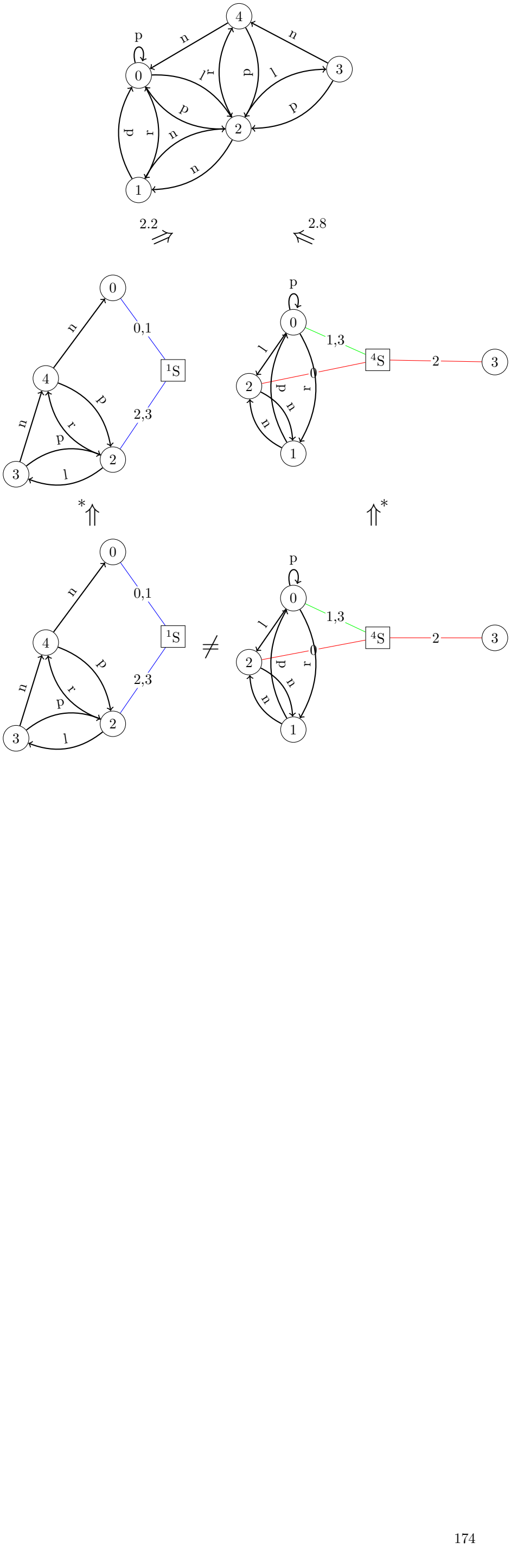
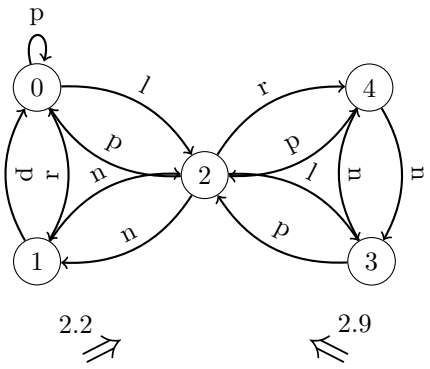
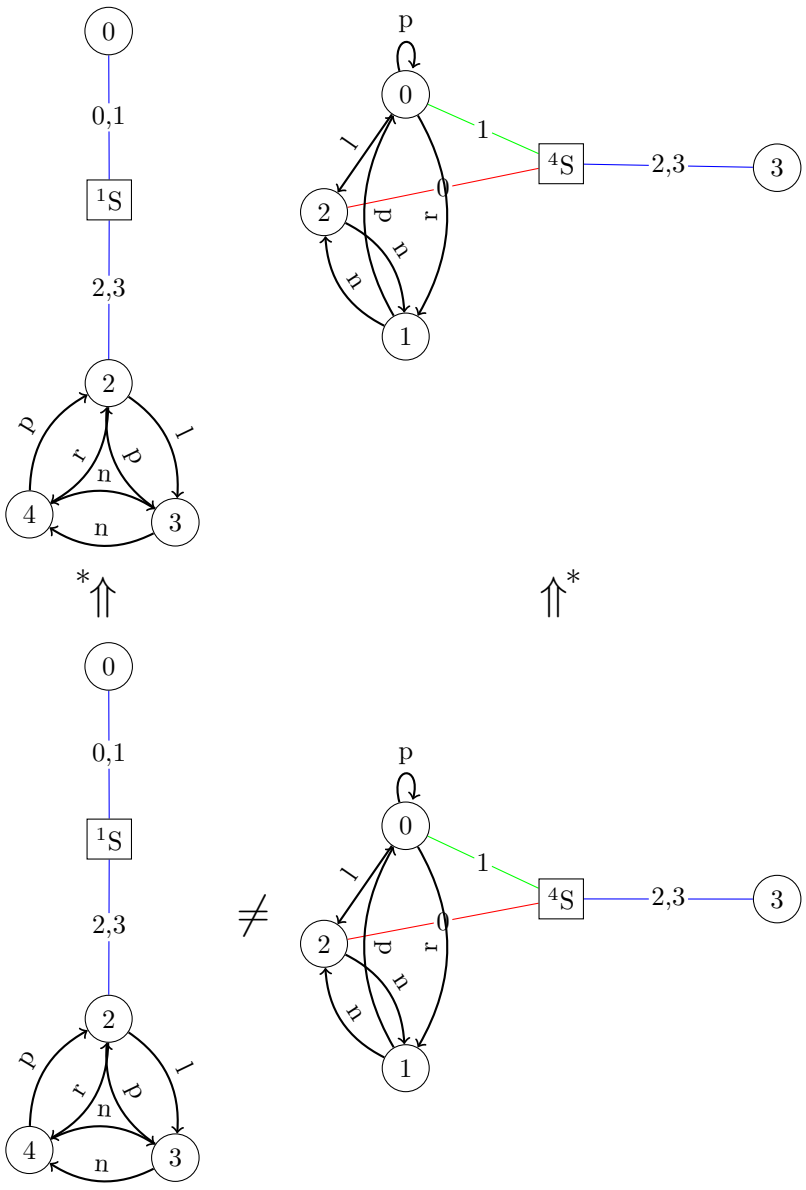


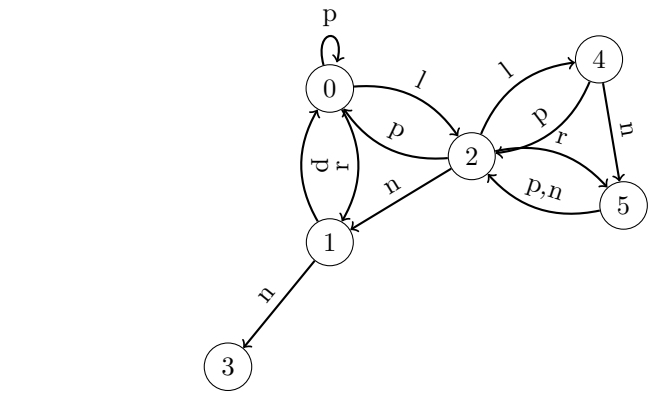
### 1.172 Critical Pair (Not Joinable)



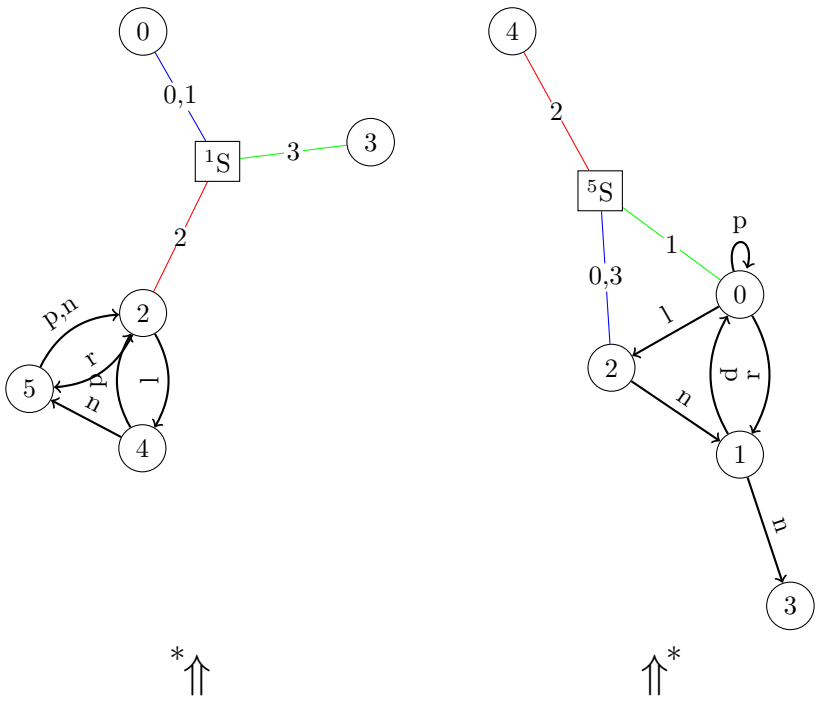

2.2 2.9



### 1.173 Critical Pair (Not Joinable)




2.3 2.7

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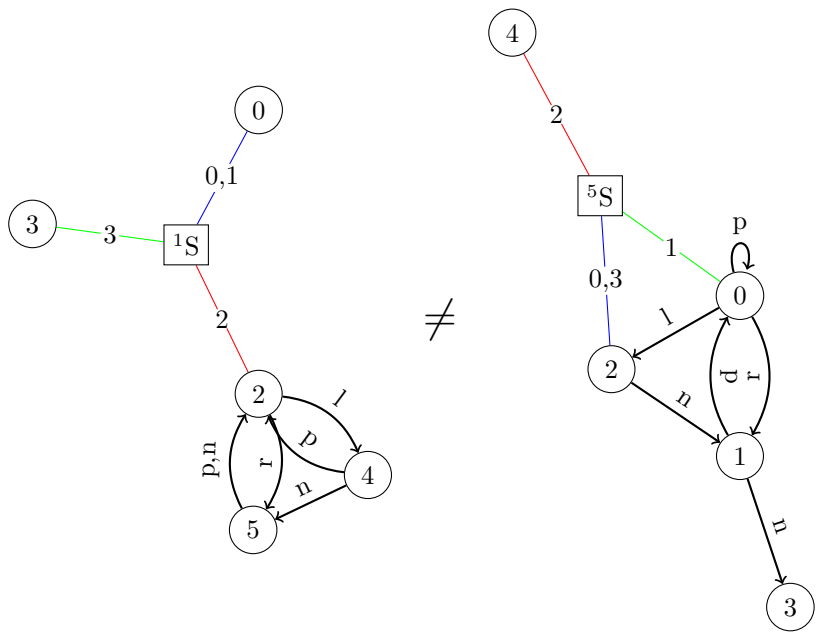
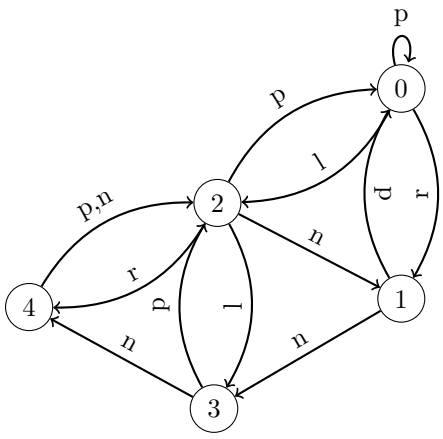
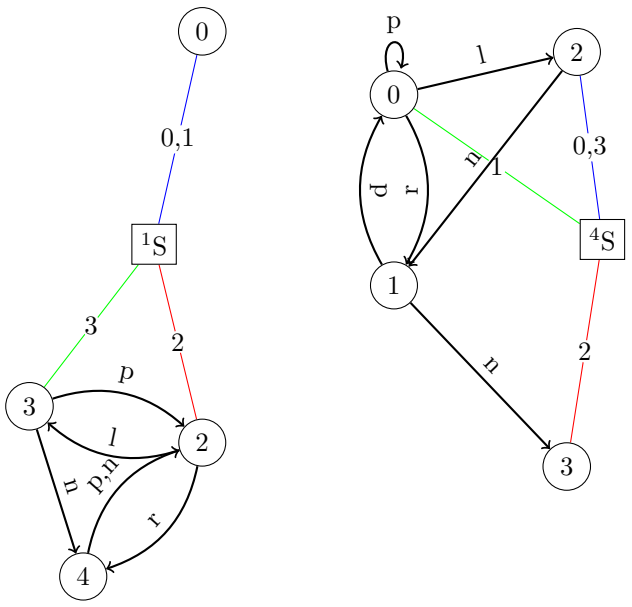
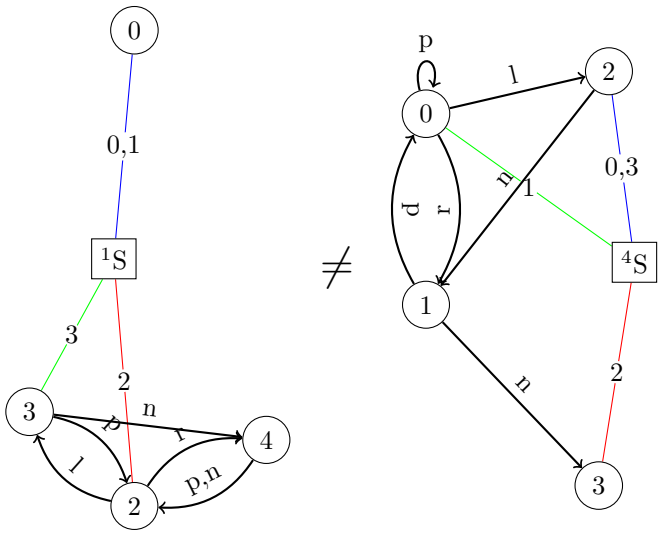


### 1.174 Critical Pair (Not Joinable)

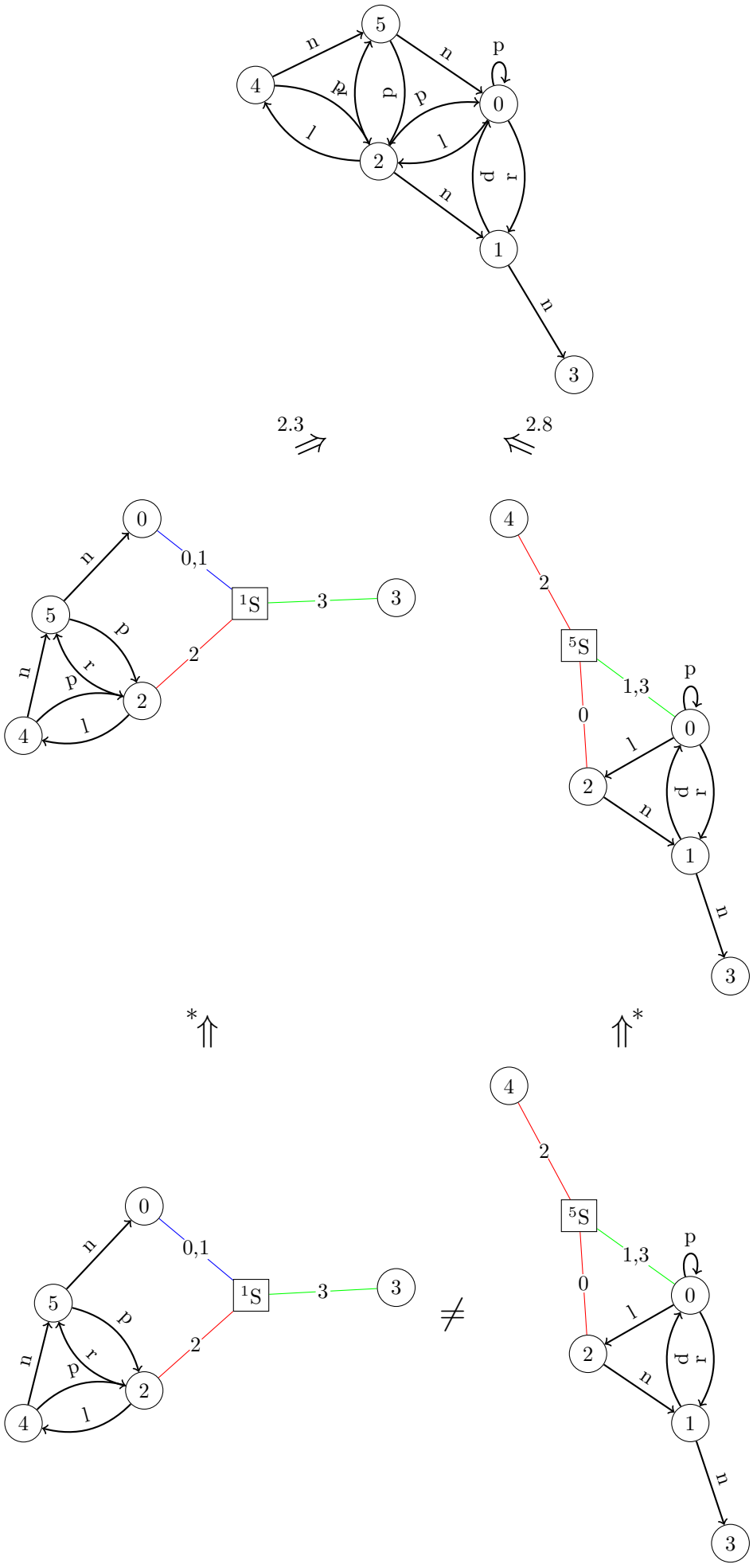



2.3 2.7

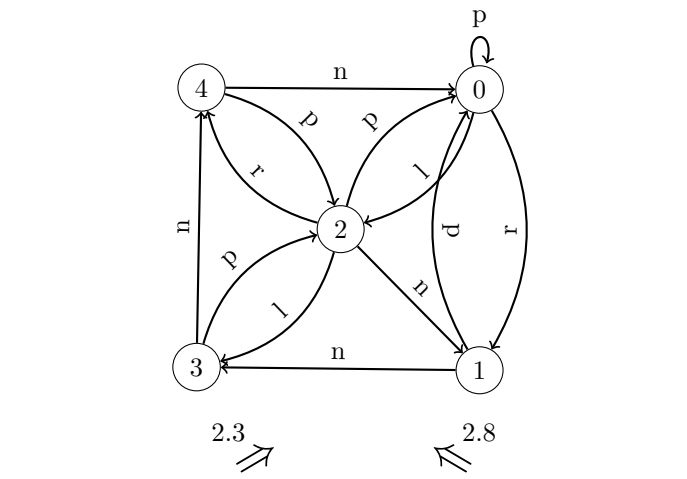


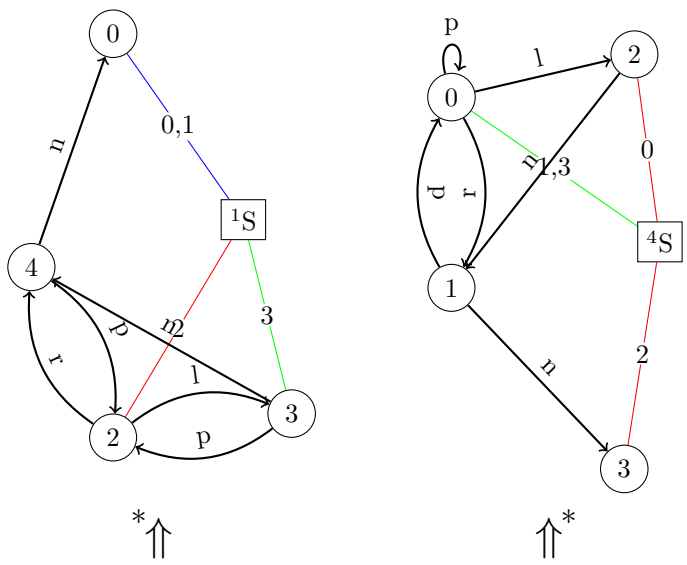



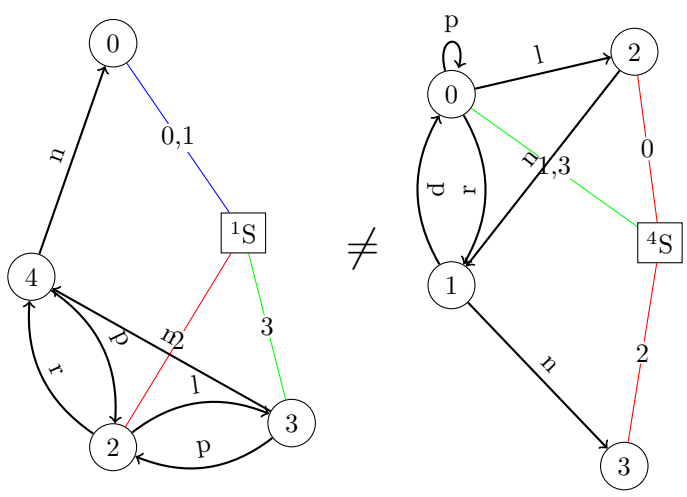
### 1.175 Critical Pair (Not Joinable)



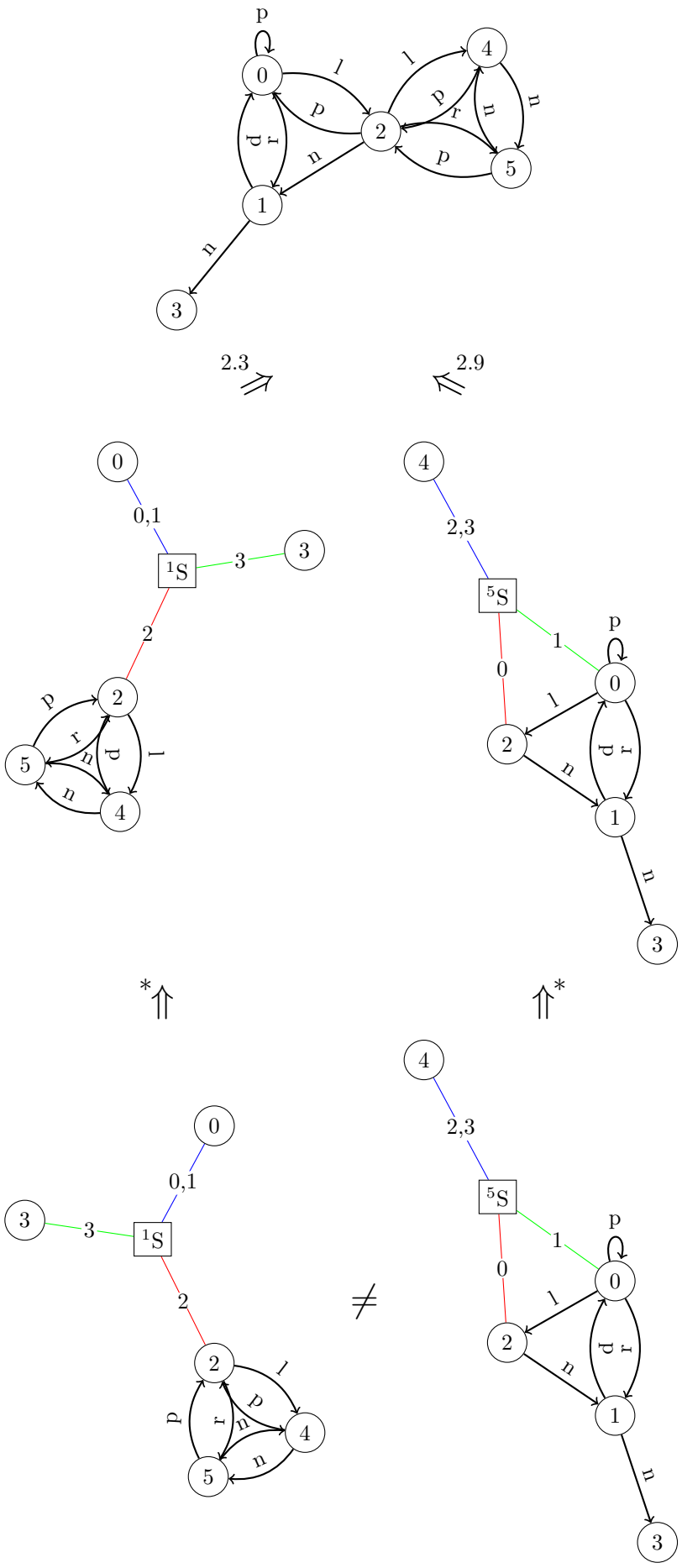
### 1.176 Critical Pair (Not Joinable)



### 1.177 Critical Pair (Not Joinable)

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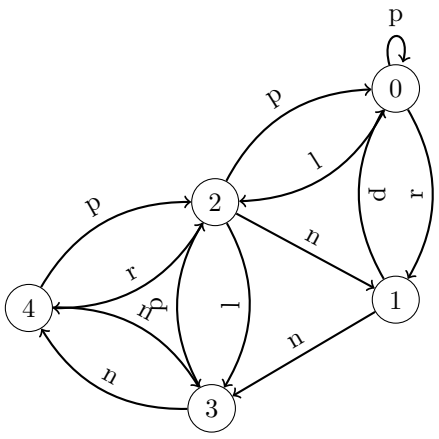
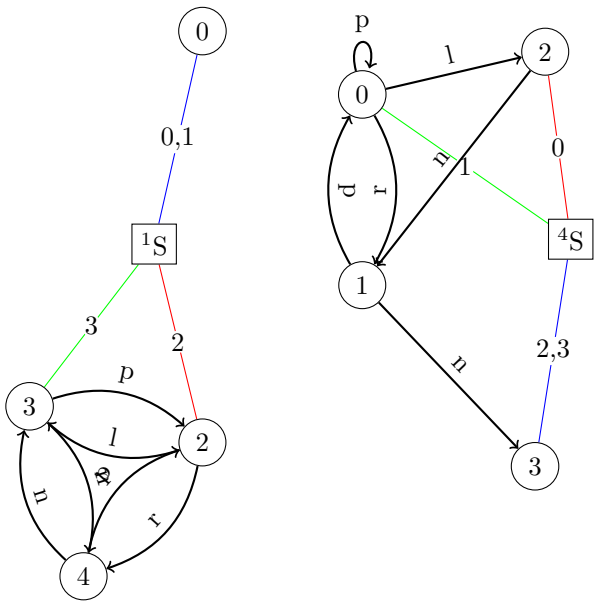
## 1.178 Critical Pair (Not Joinable)




2.3 2.9

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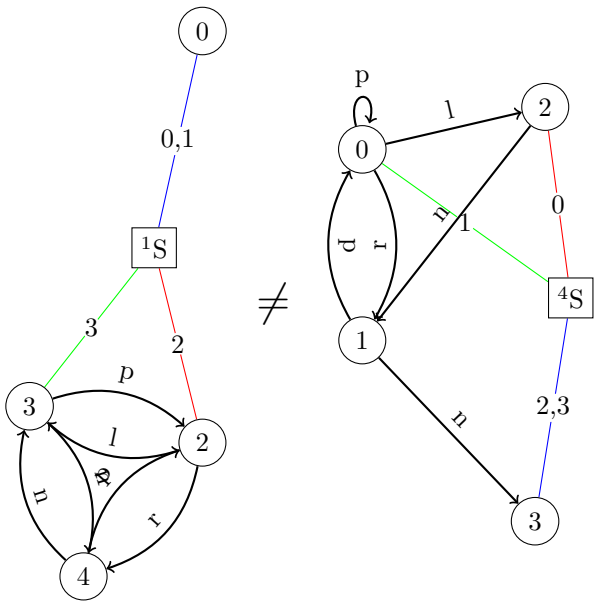


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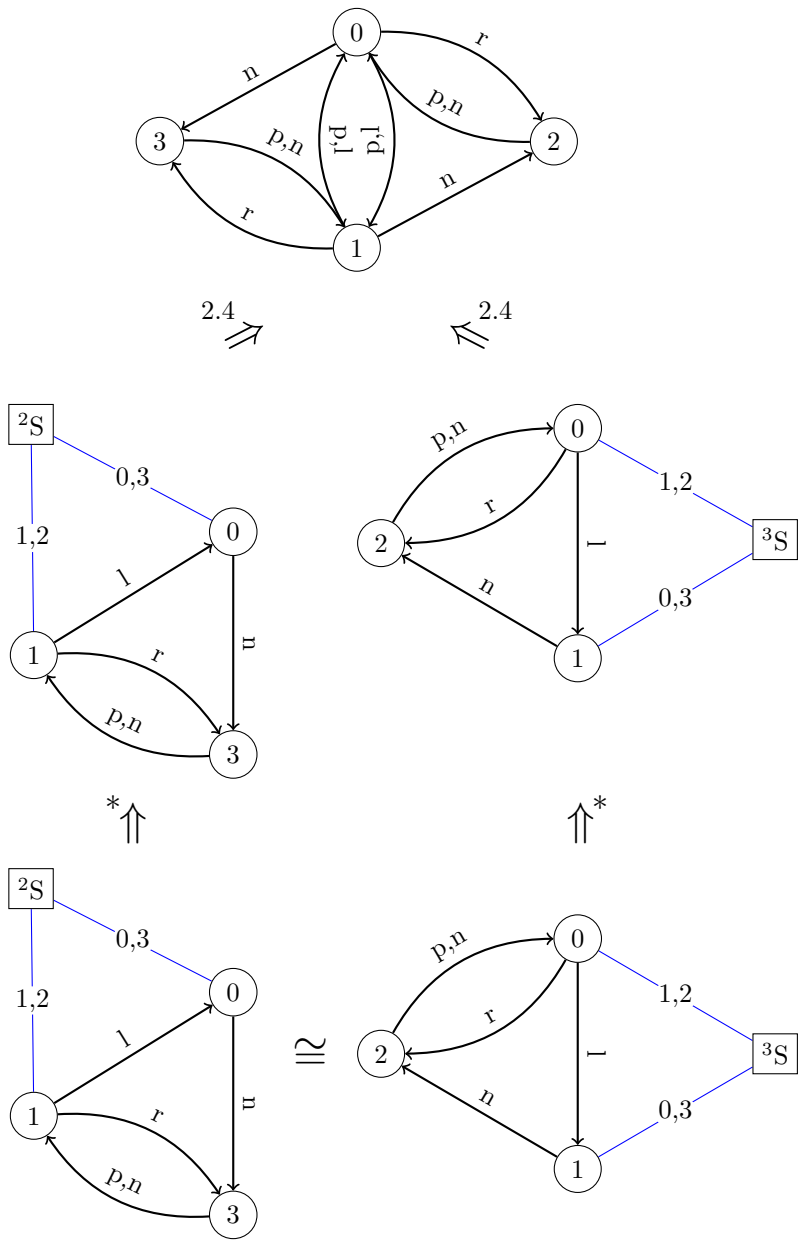
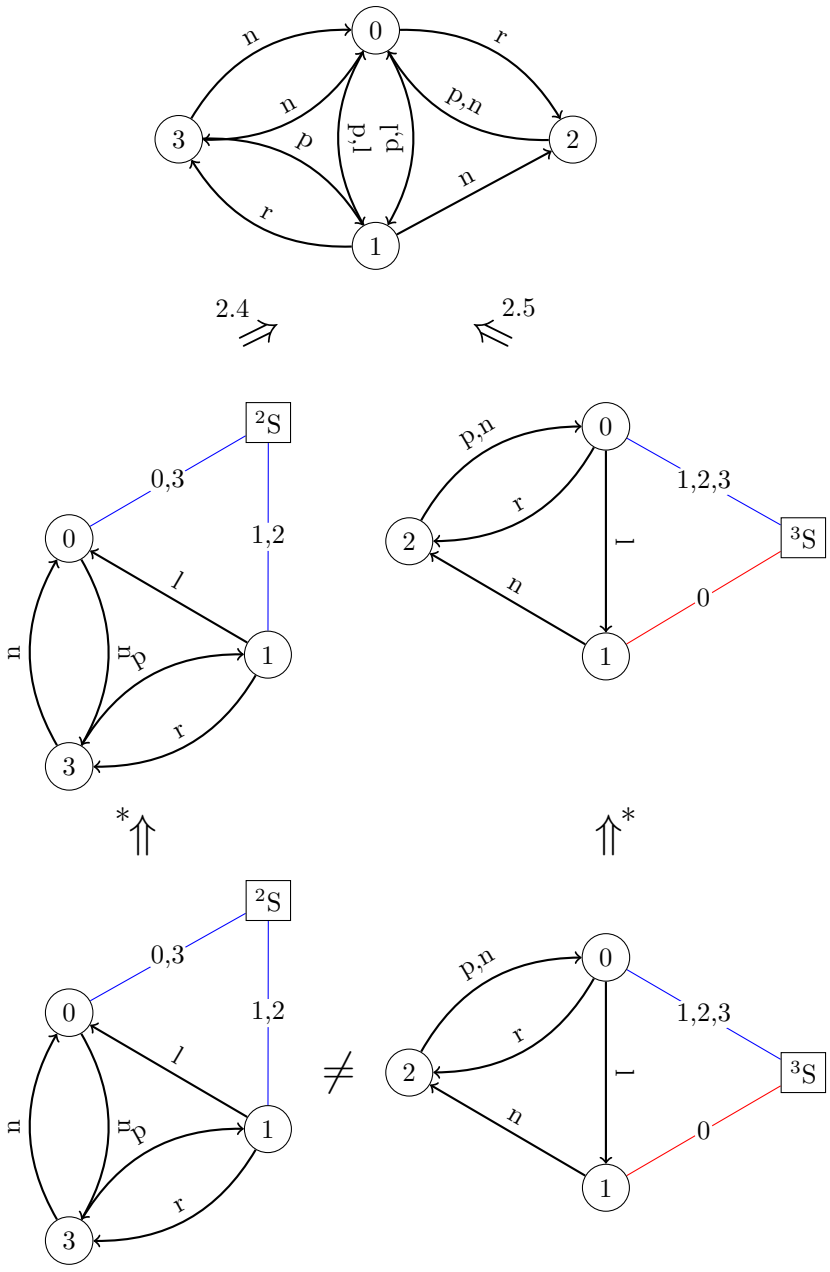
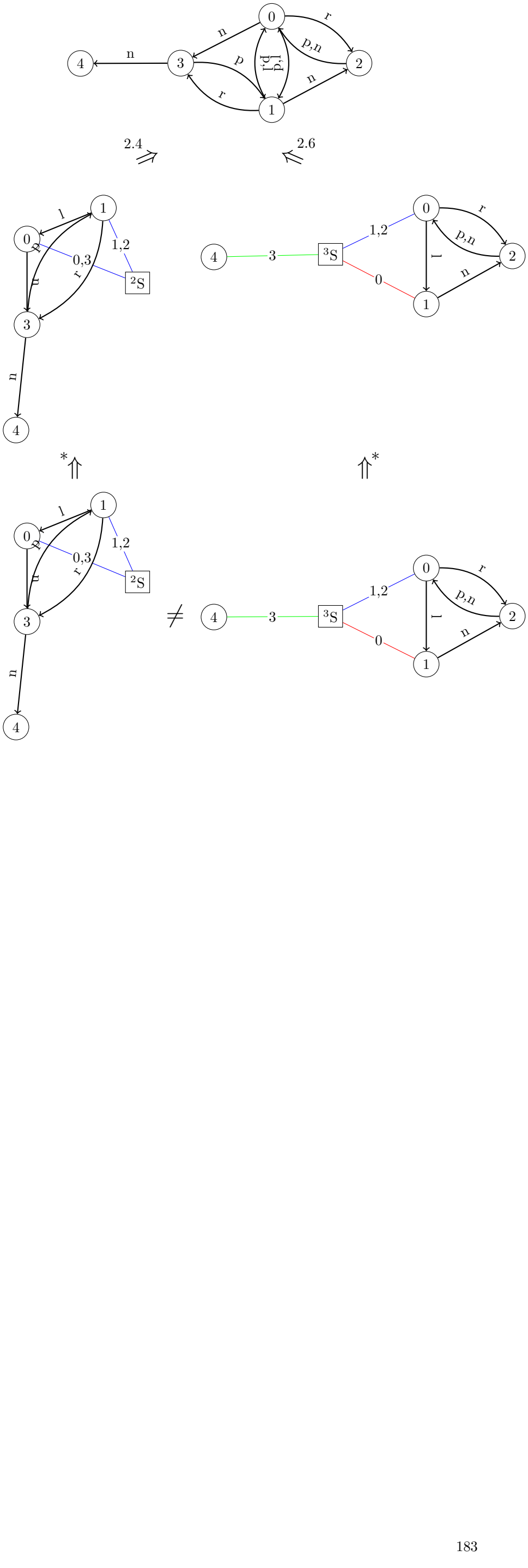
## 1.179 Critical Pair (Weakly Joinable)



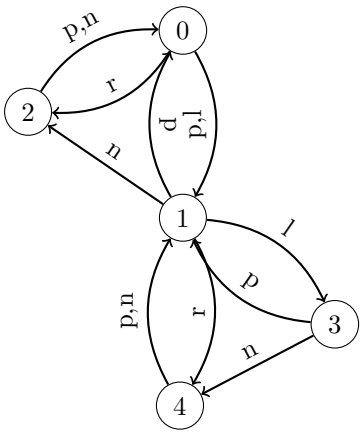

## 1.180 Critical Pair (Not Joinable)



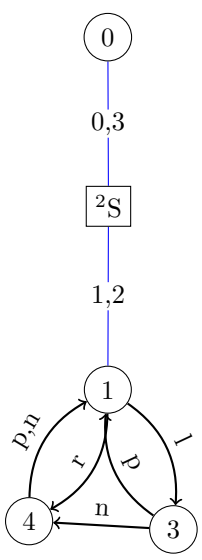
### 1.181 Critical Pair (Not Joinable)

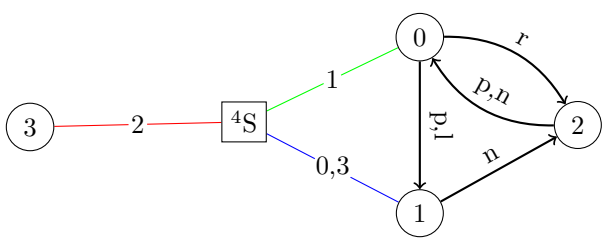


## 1.182 Critical Pair (Not Joinable)




2.4 2.7

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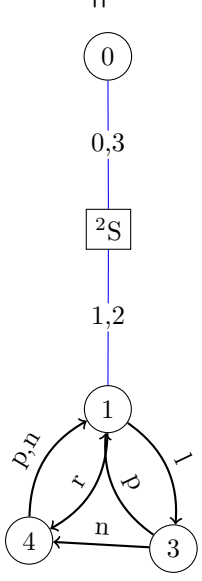


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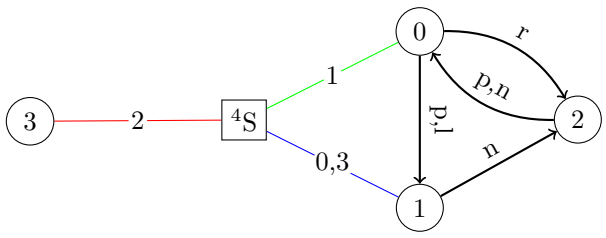
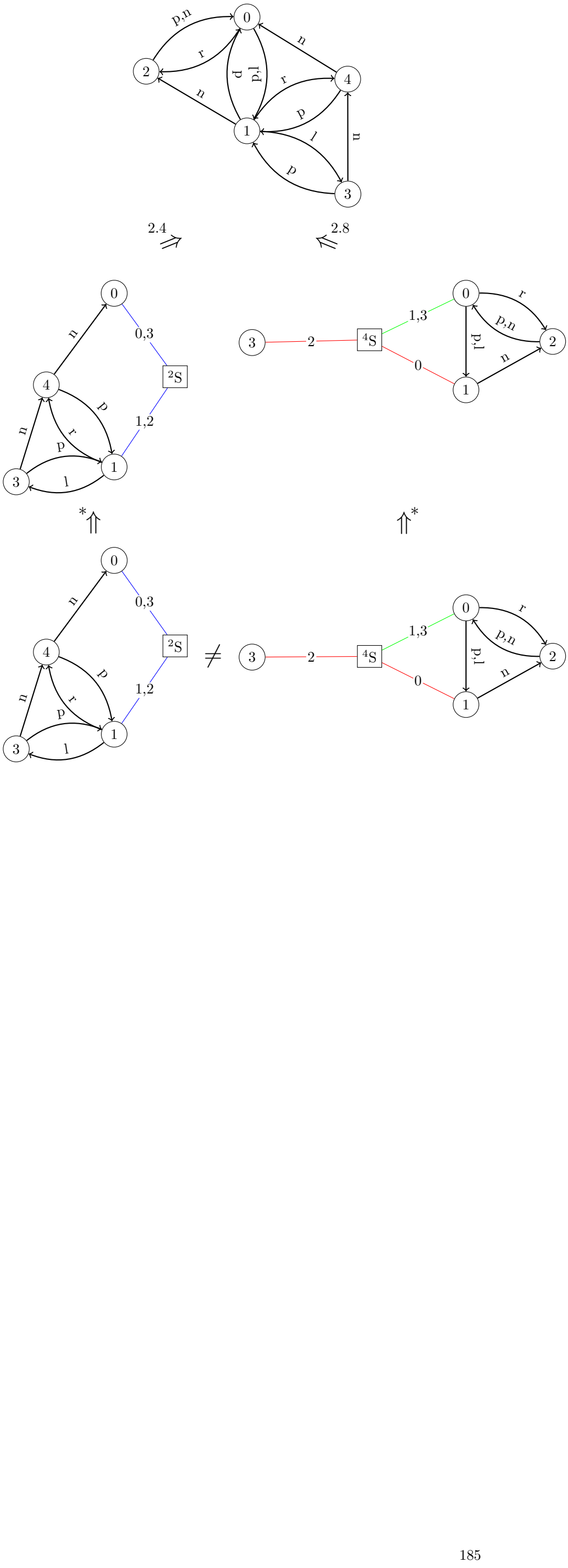
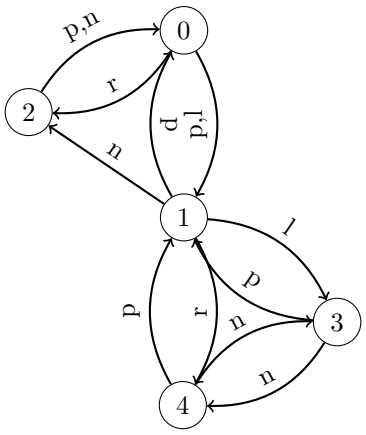


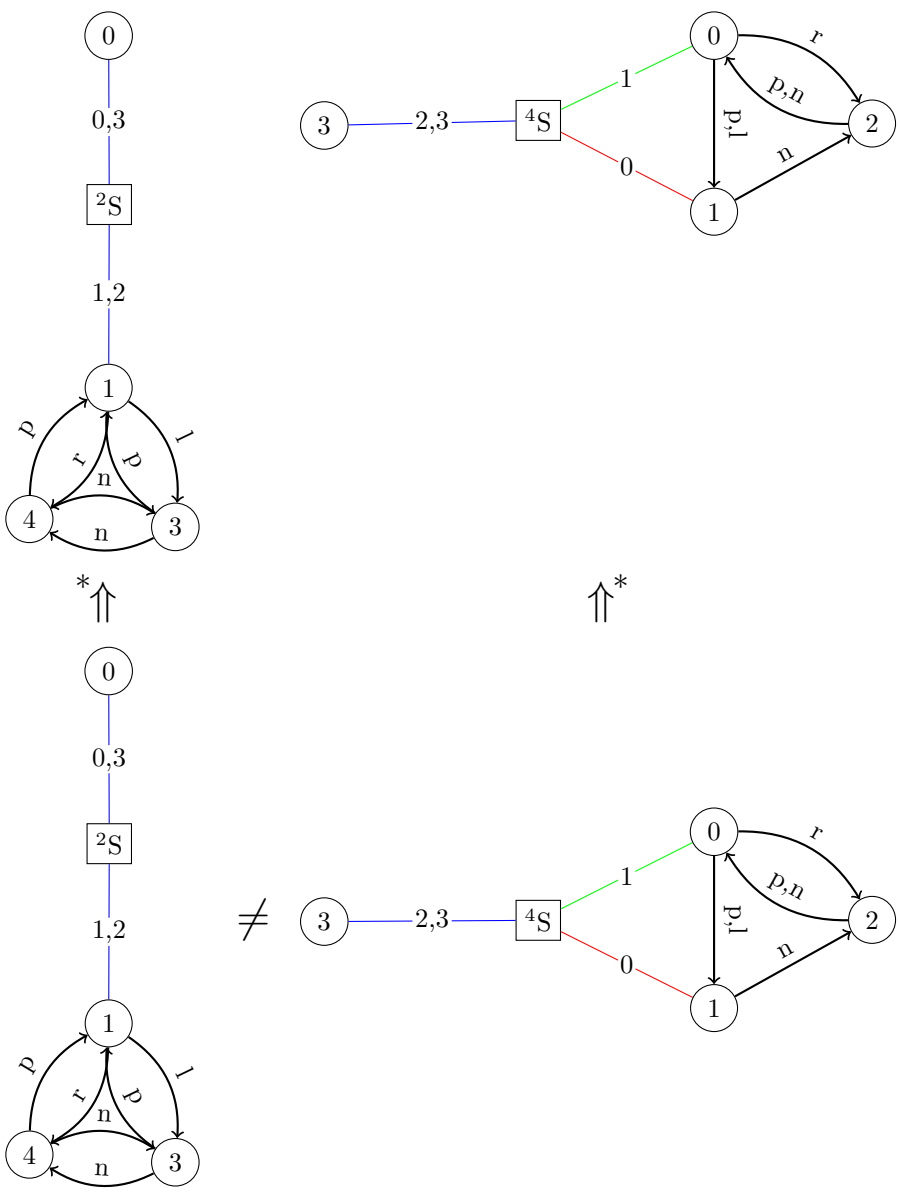
### 1.183 Critical Pair (Not Joinable)



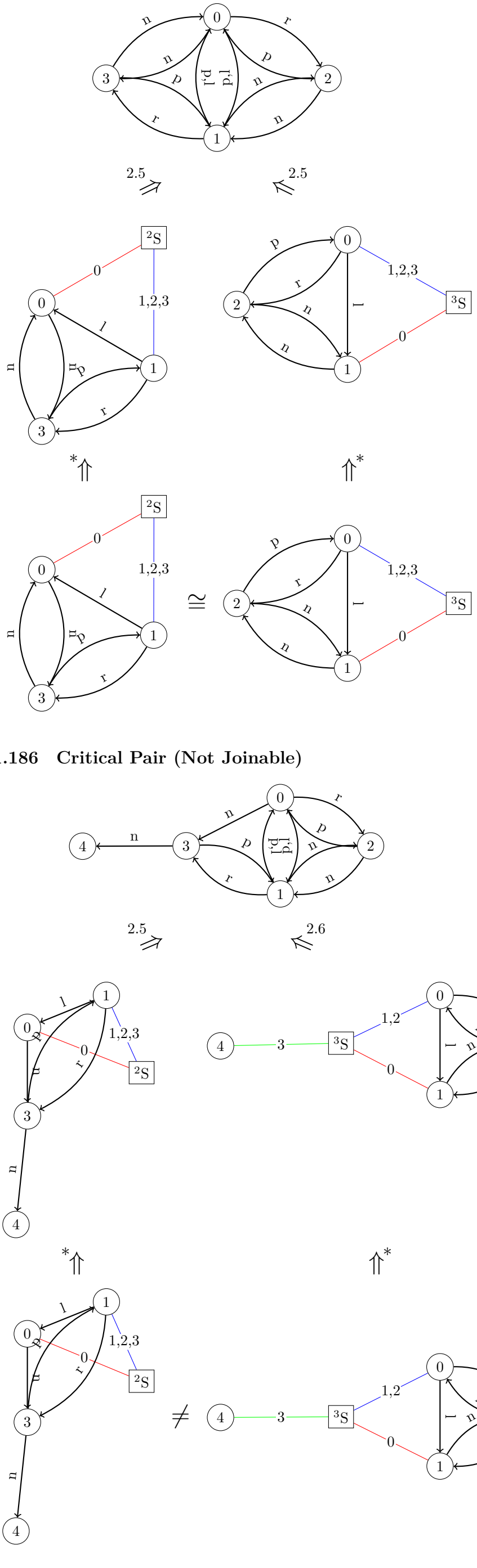
## 1.184 Critical Pair (Not Joinable)



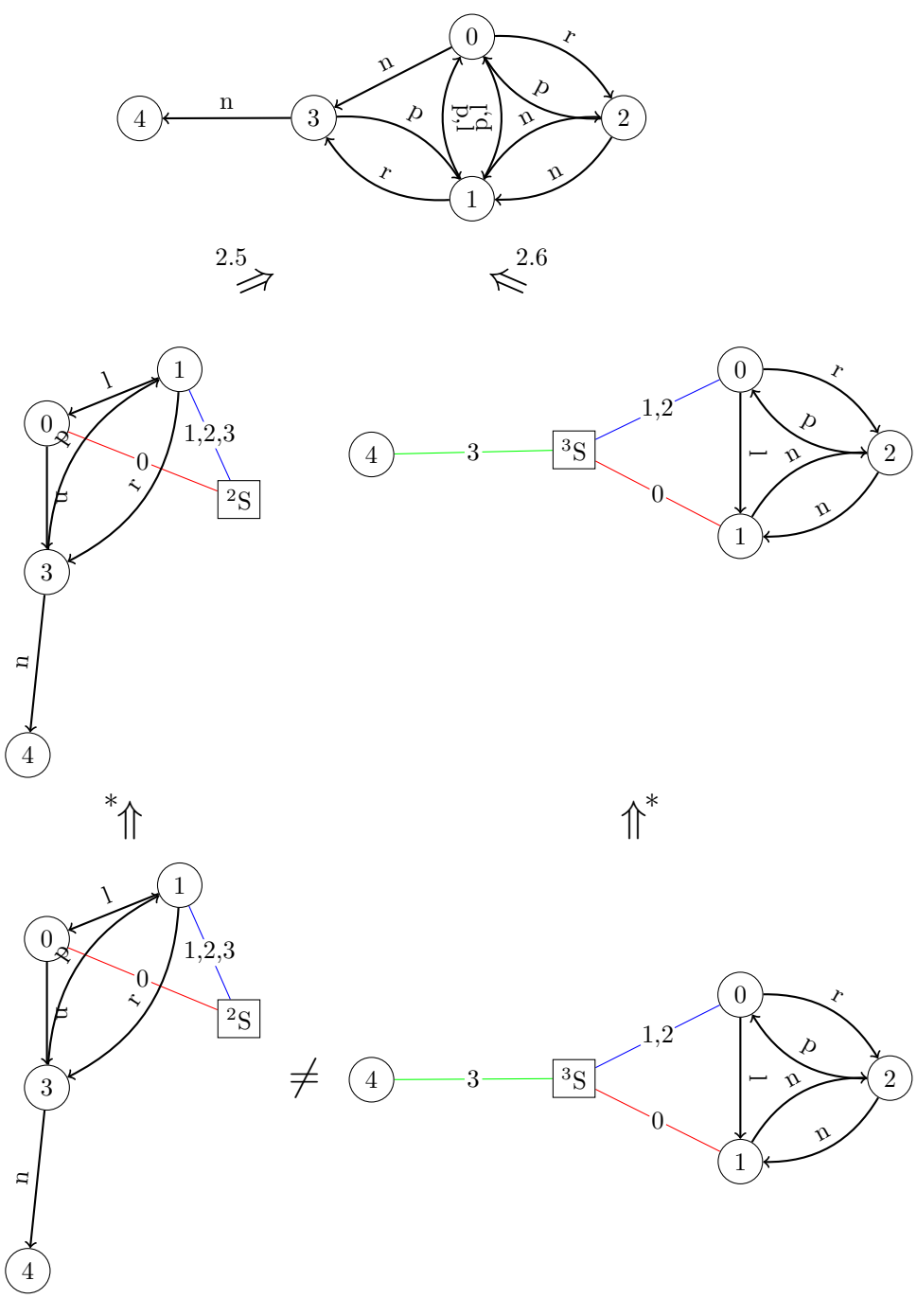

2.4 2.9



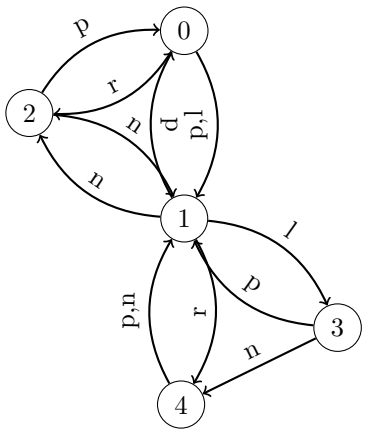
### 1.185 Critical Pair (Weakly Joinable)



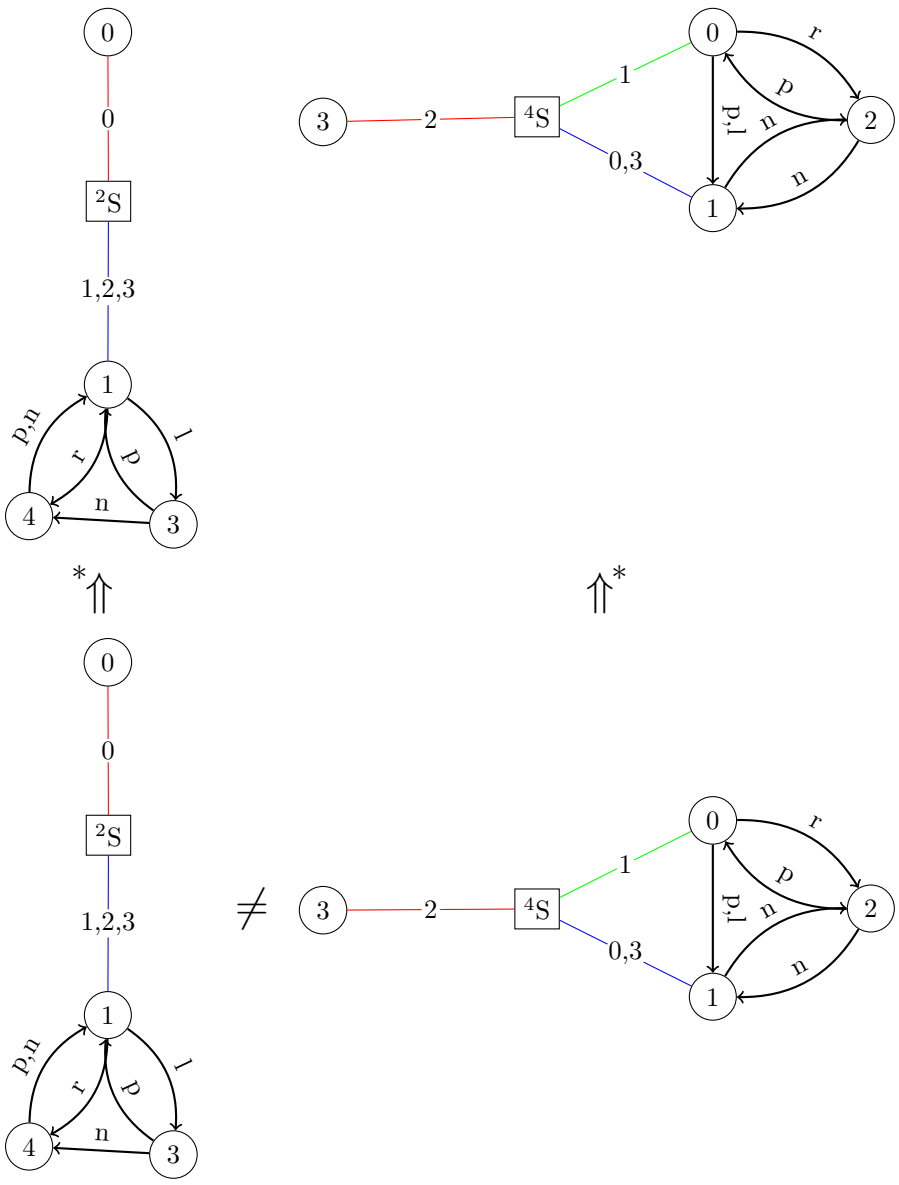

### 1.186 Critical Pair (Not Joinable)



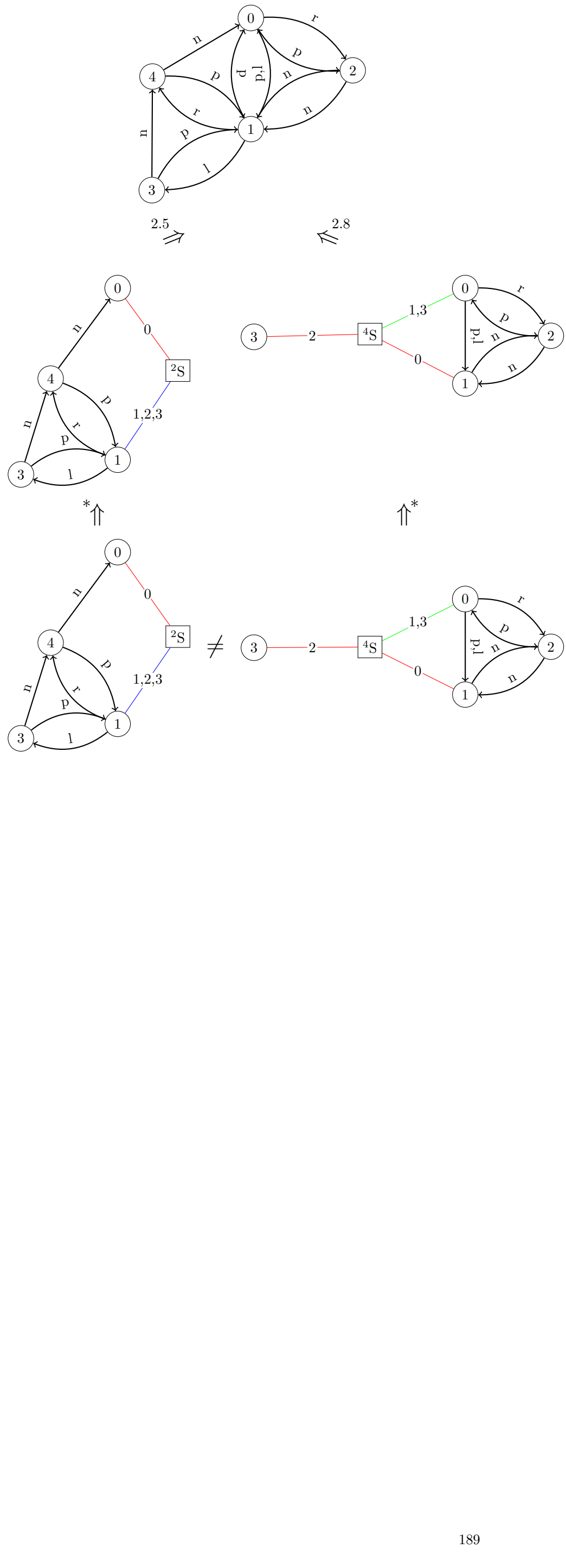
## 1.187 Critical Pair (Not Joinable)



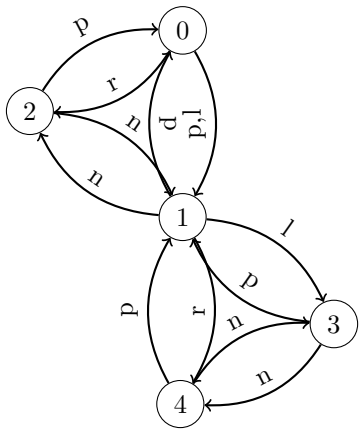

2.5 2.7



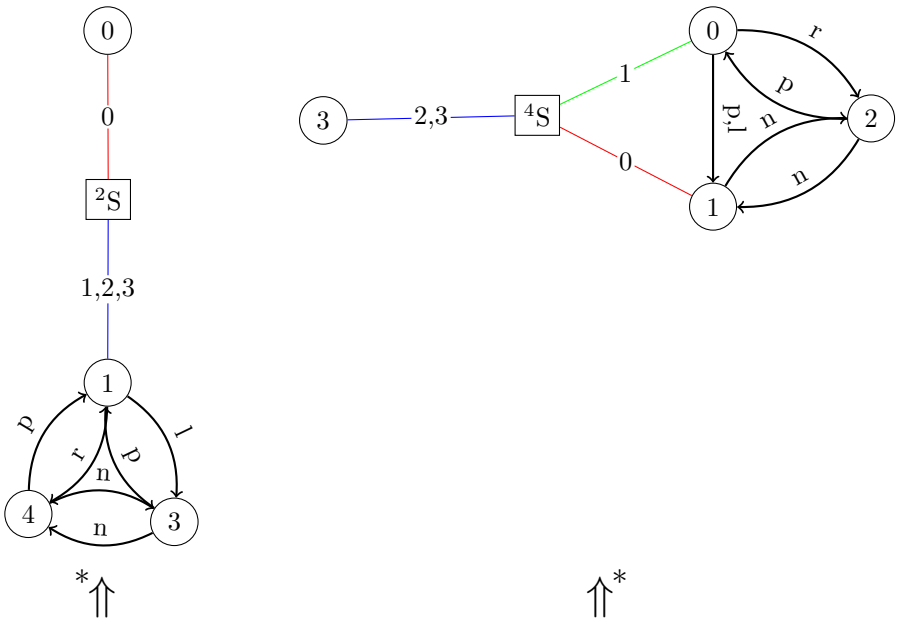
## 1.188 Critical Pair (Not Joinable)



## 1.189 Critical Pair (Not Joinable)




2.5 2.9

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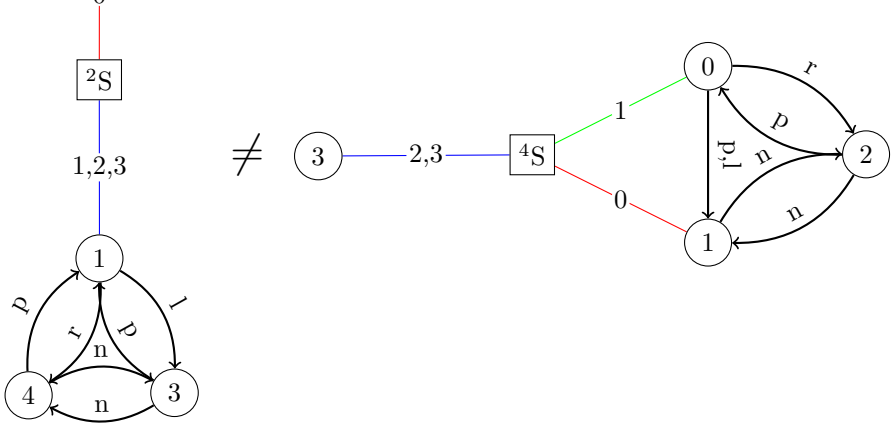
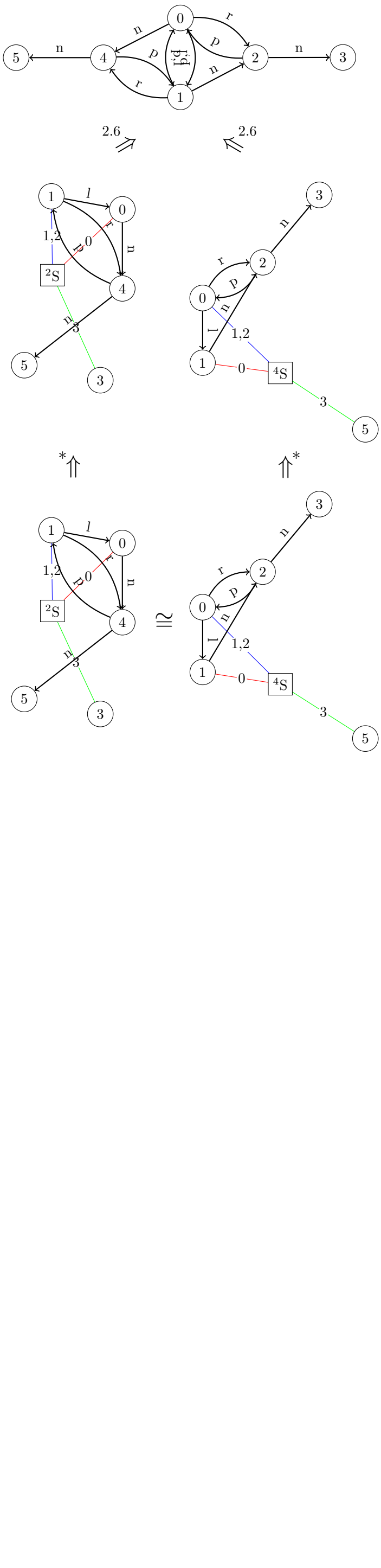
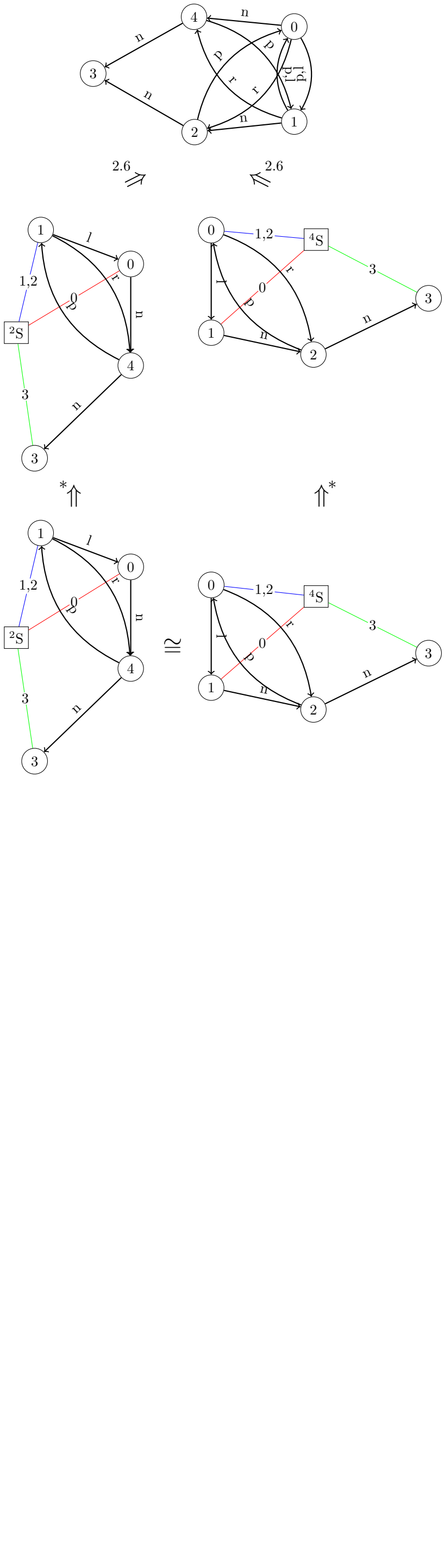


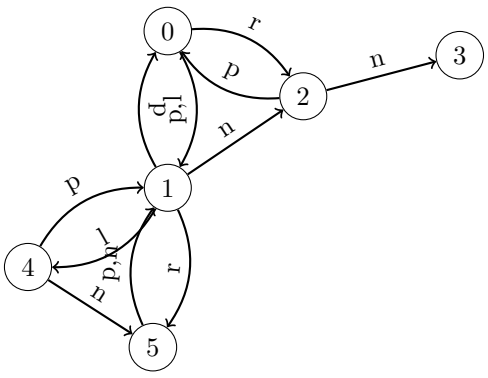
## 1.190 Critical Pair (Weakly Joinable)



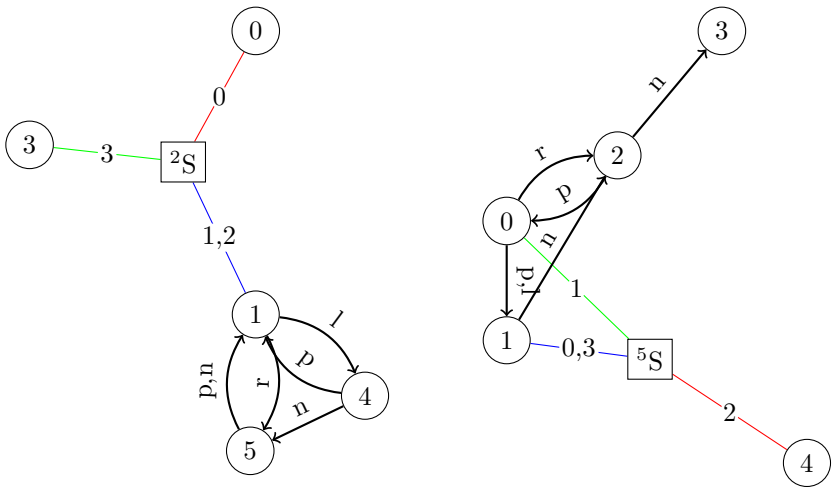
### 1.191 Critical Pair (Weakly Joinable)



## 1.192 Critical Pair (Not Joinable)




2.6 2.7







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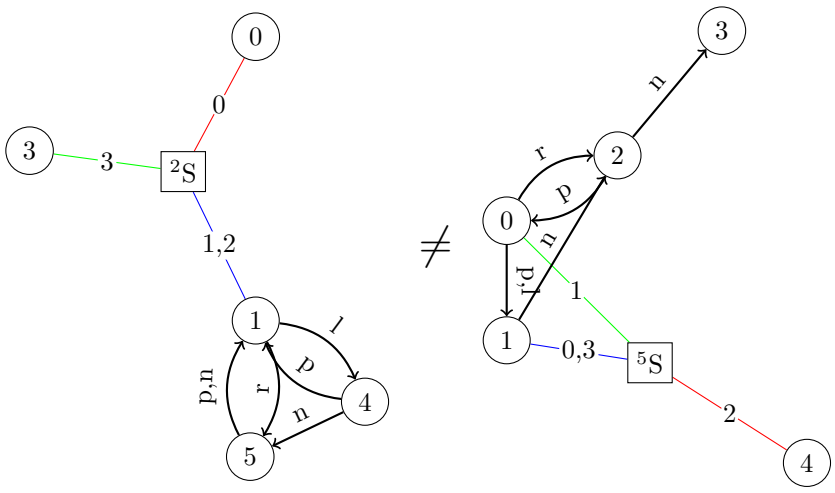


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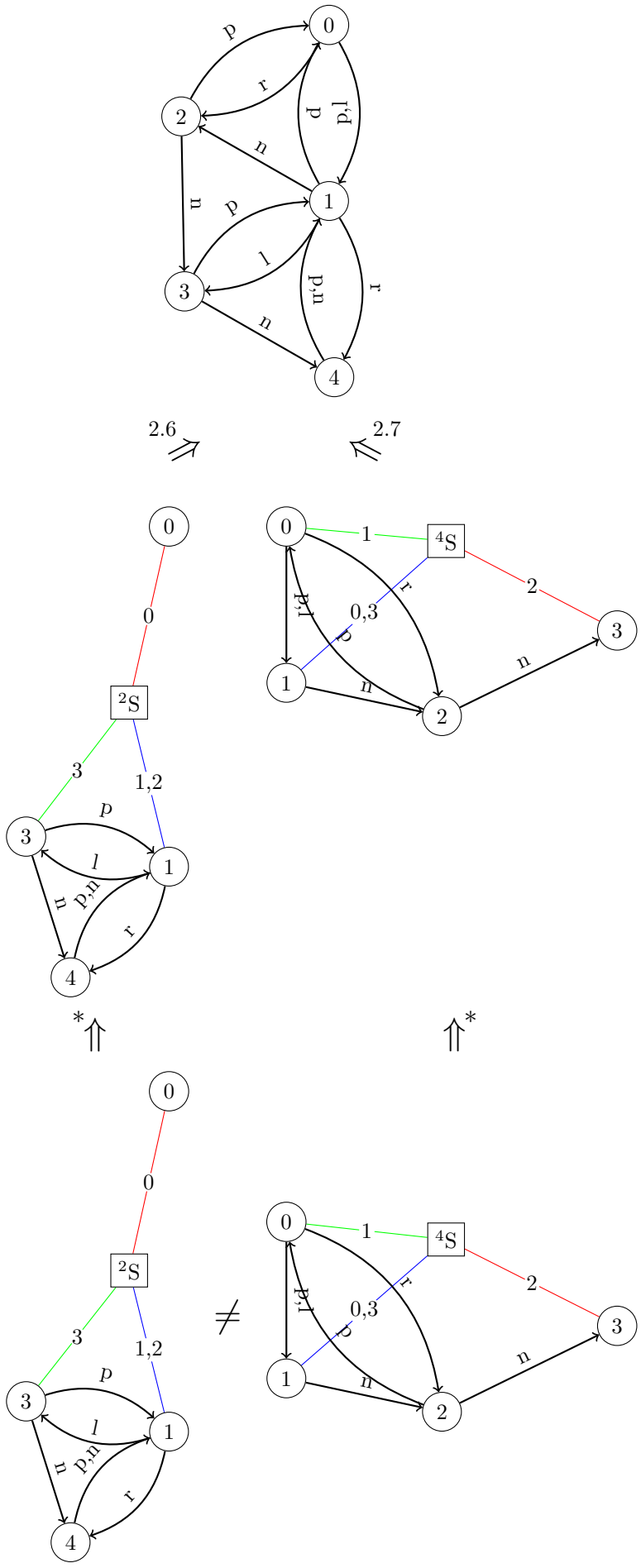
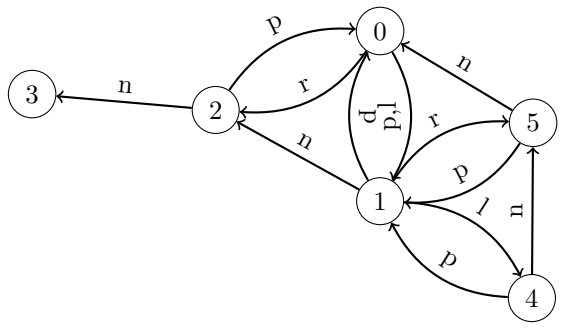
### 1.193 Critical Pair (Not Joinable)



## 1.194 Critical Pair (Not Joinable)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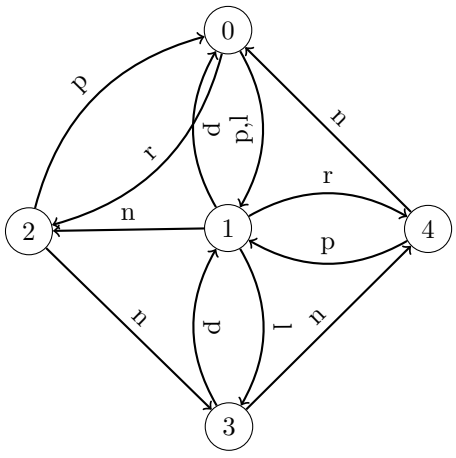
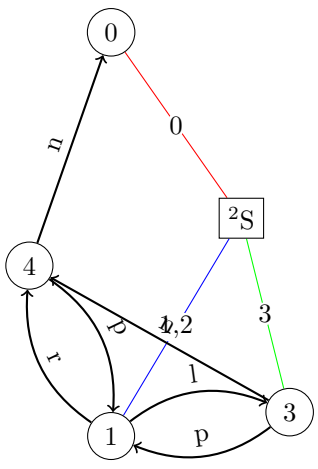
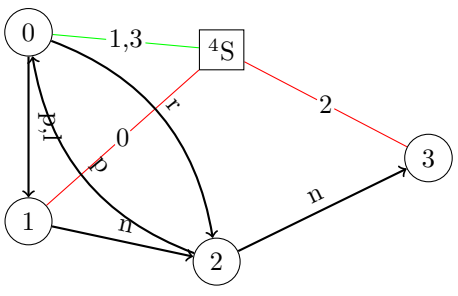
### 1.195 Critical Pair (Not Joinable)

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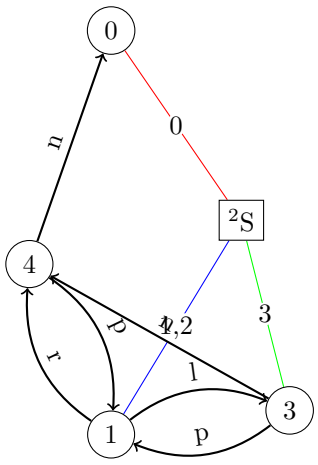
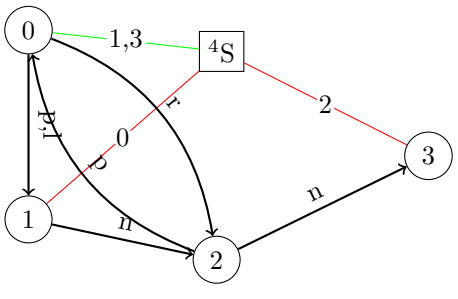
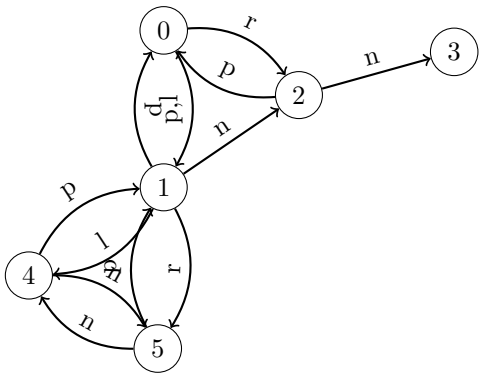
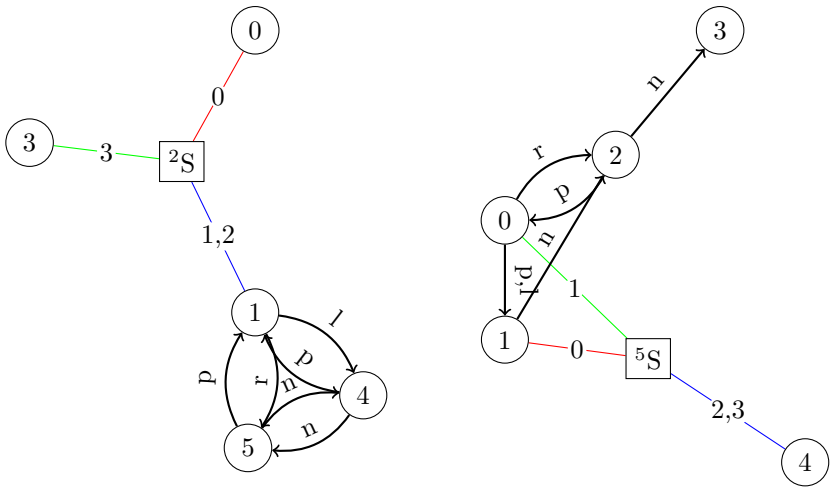


### 1.196 Critical Pair (Not Joinable)




2.6 ⇛ 2.9 ⇚

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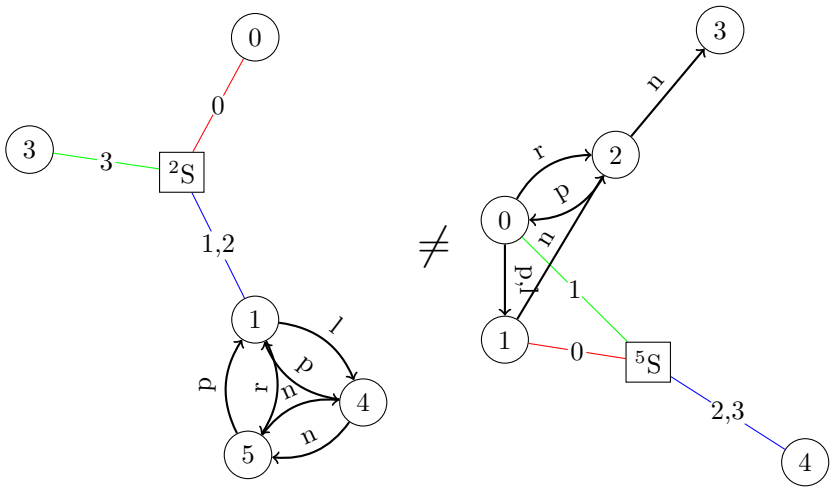
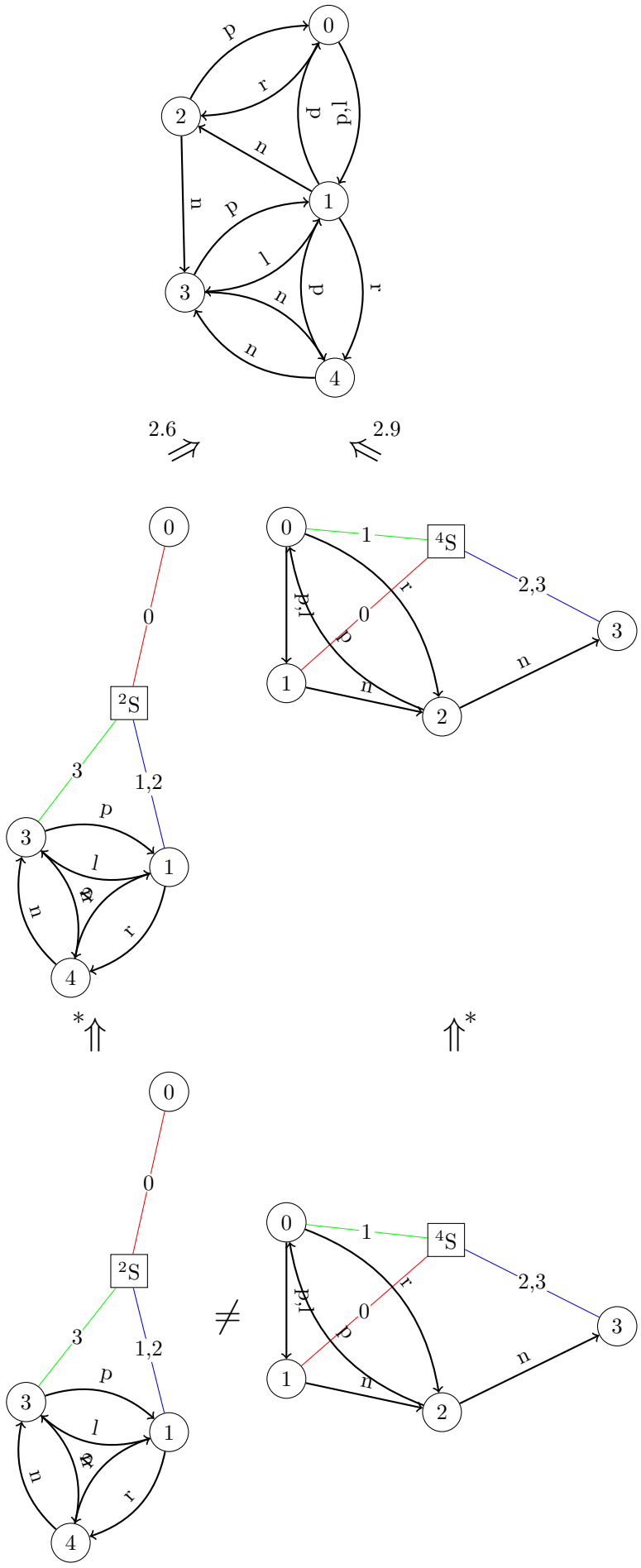
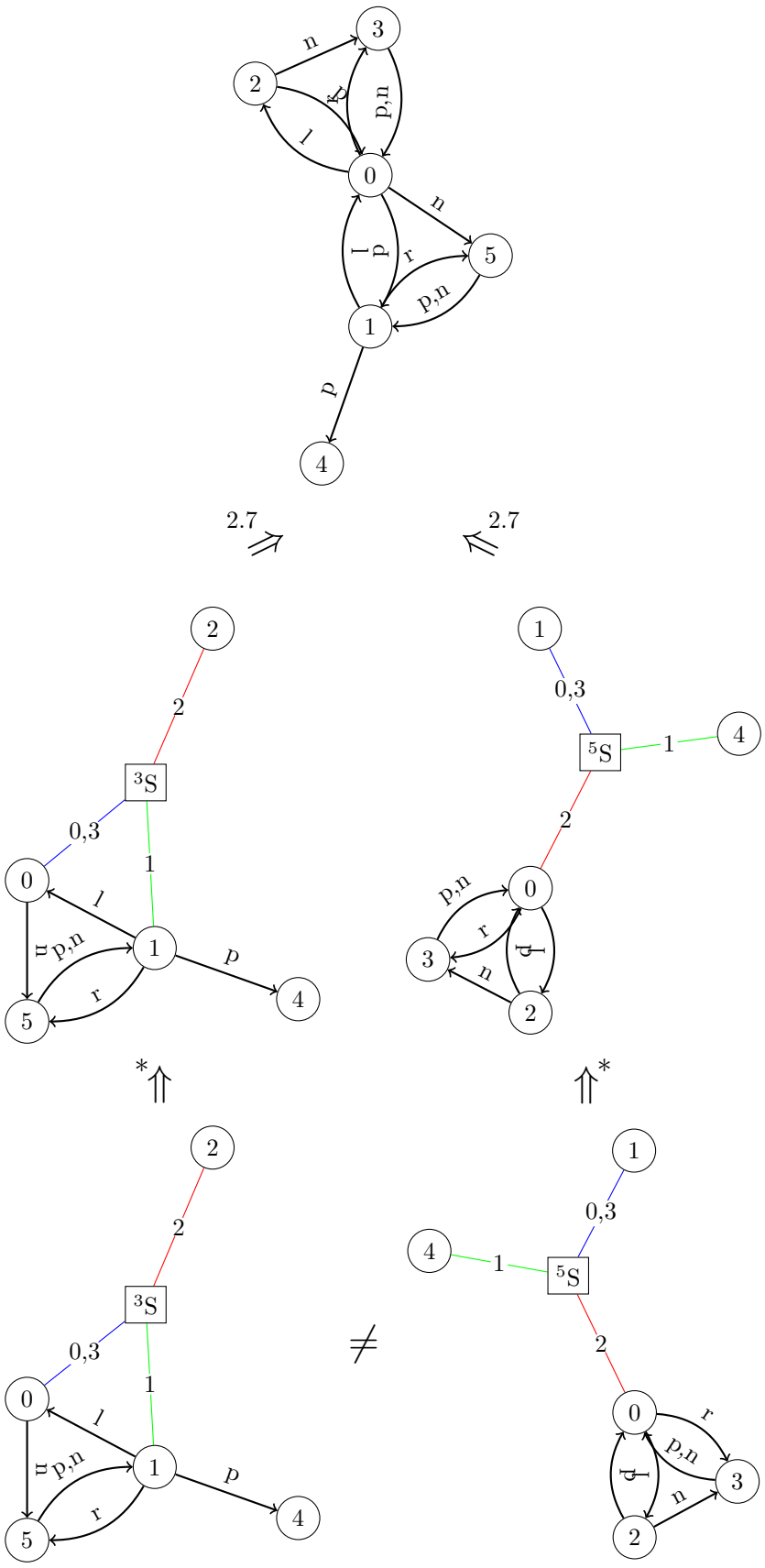


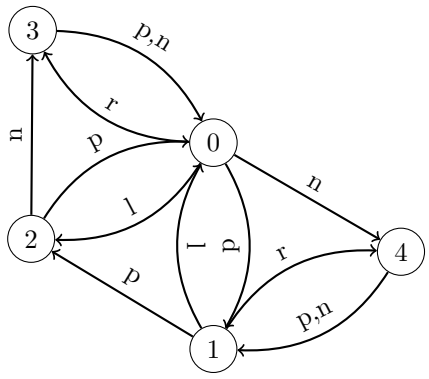
### 1.197 Critical Pair (Not Joinable)



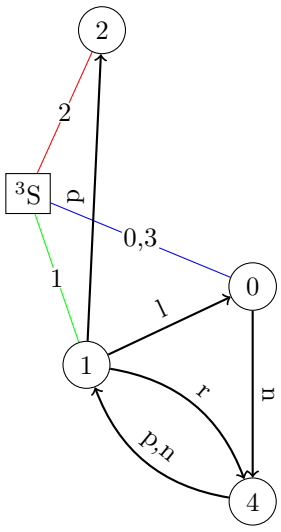
### 1.198 Critical Pair (Not Joinable)

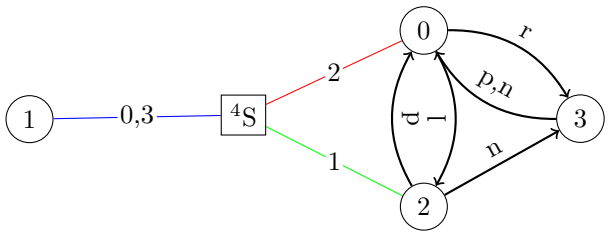


## 1.199 Critical Pair (Not Joinable)




2.7 2.7

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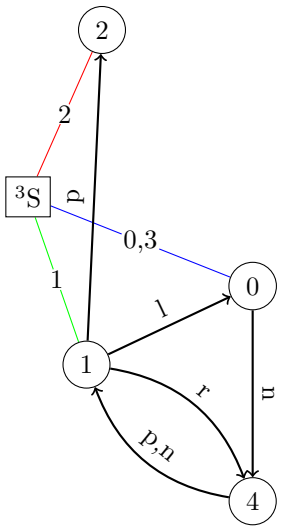


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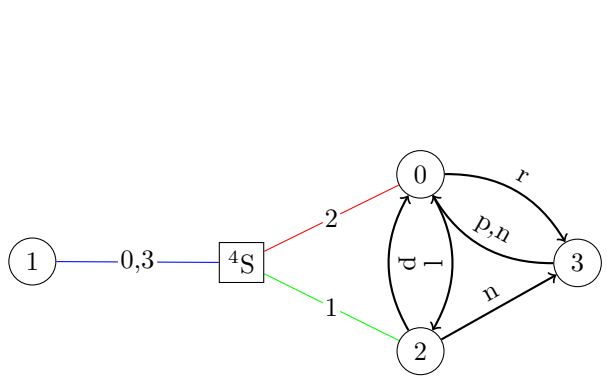
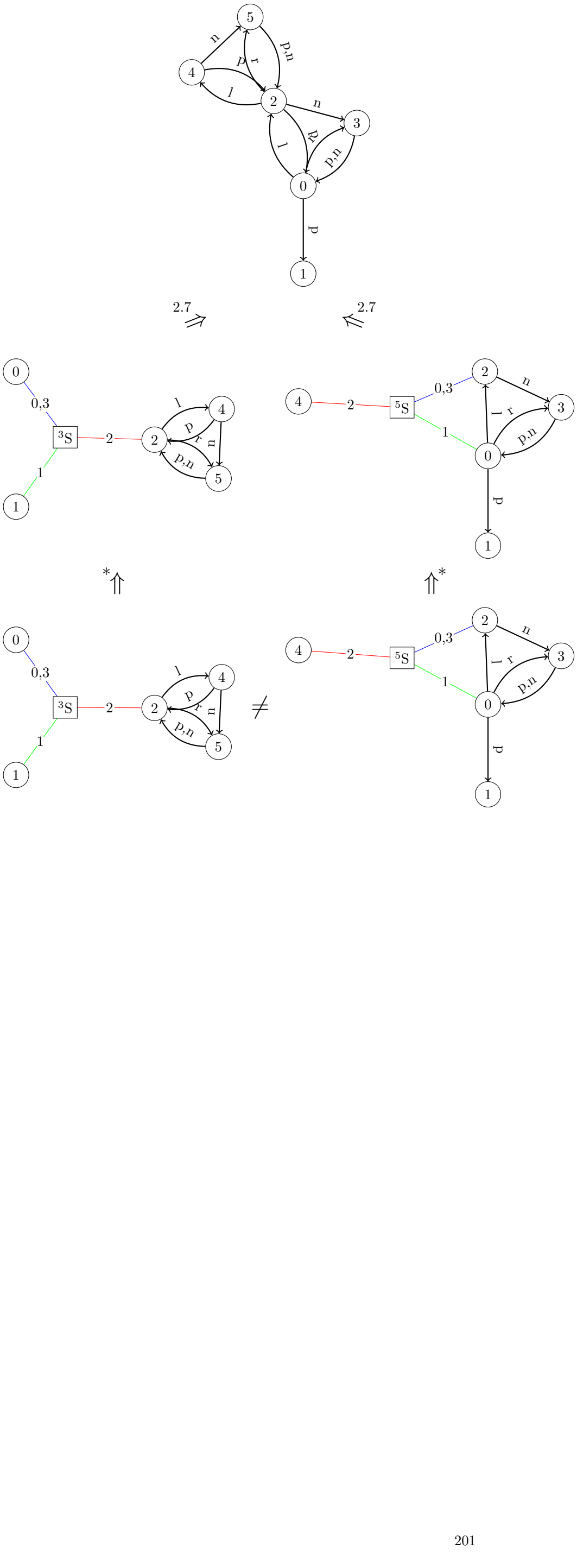
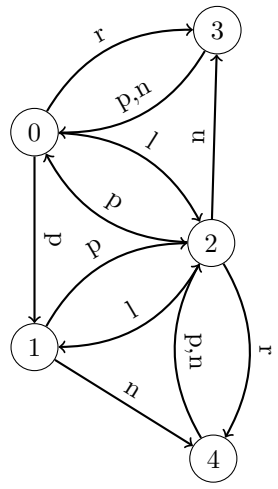


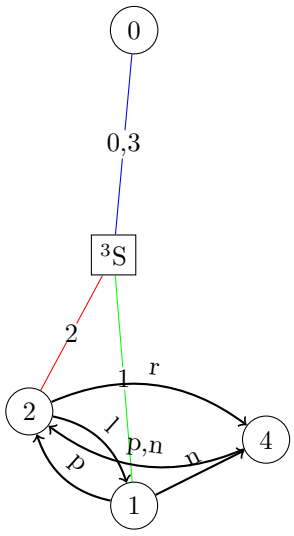
### 1.200 Critical Pair (Not Joinable)



### 1.201 Critical Pair (Not Joinable)




2.7 2.7

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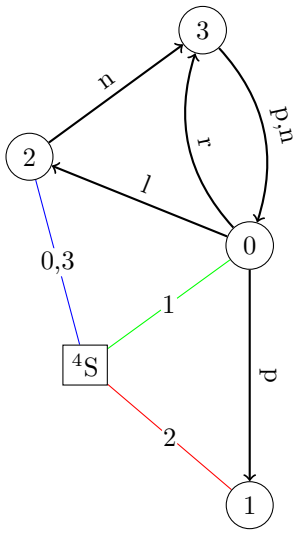


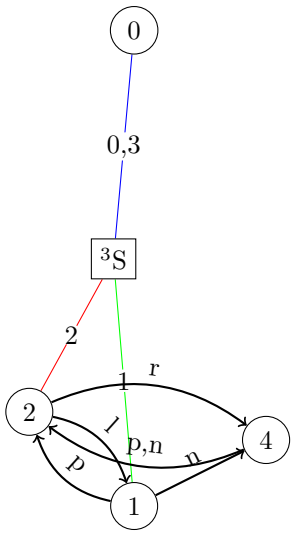


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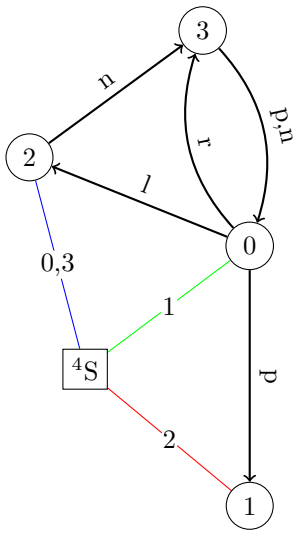
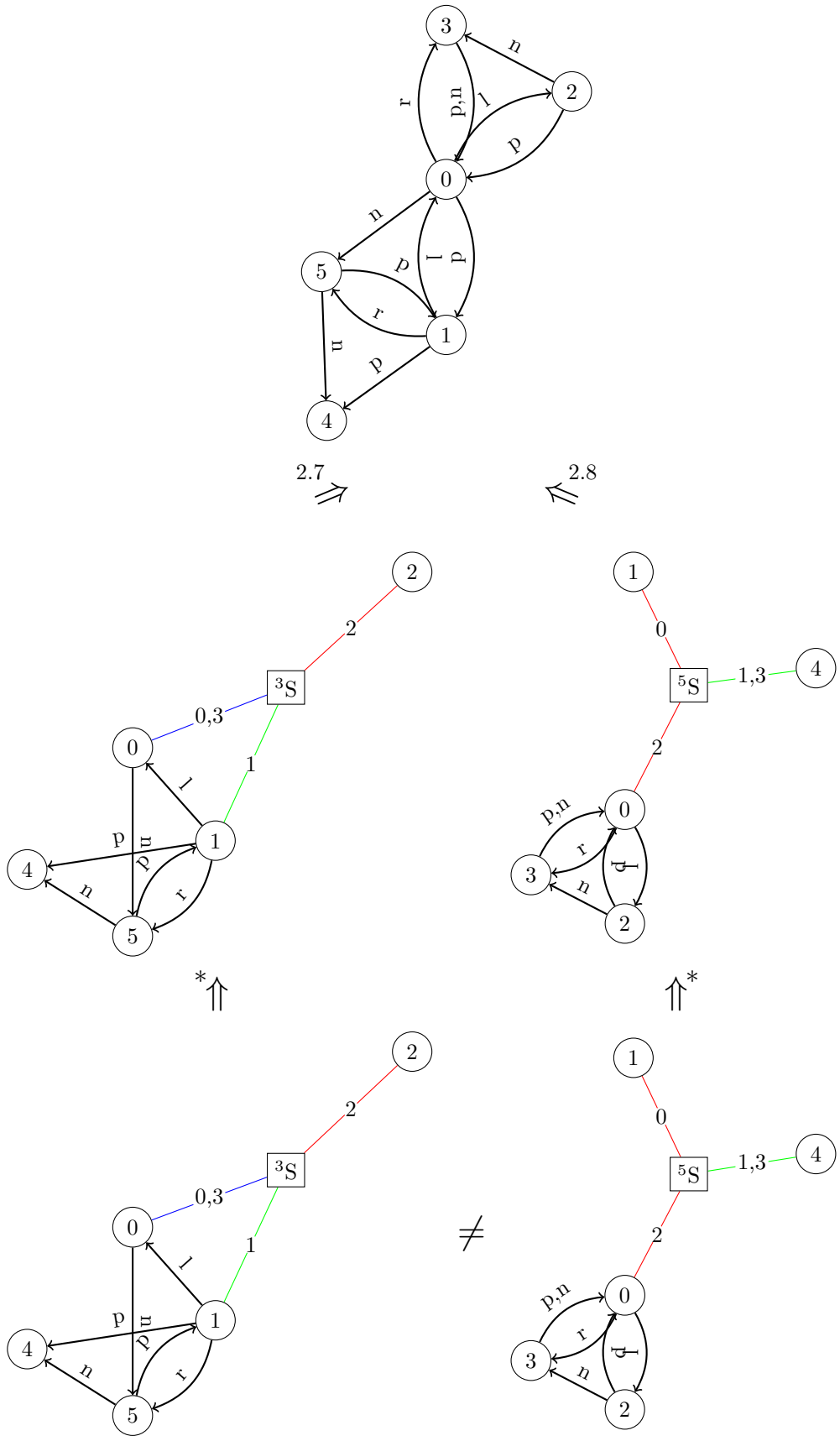
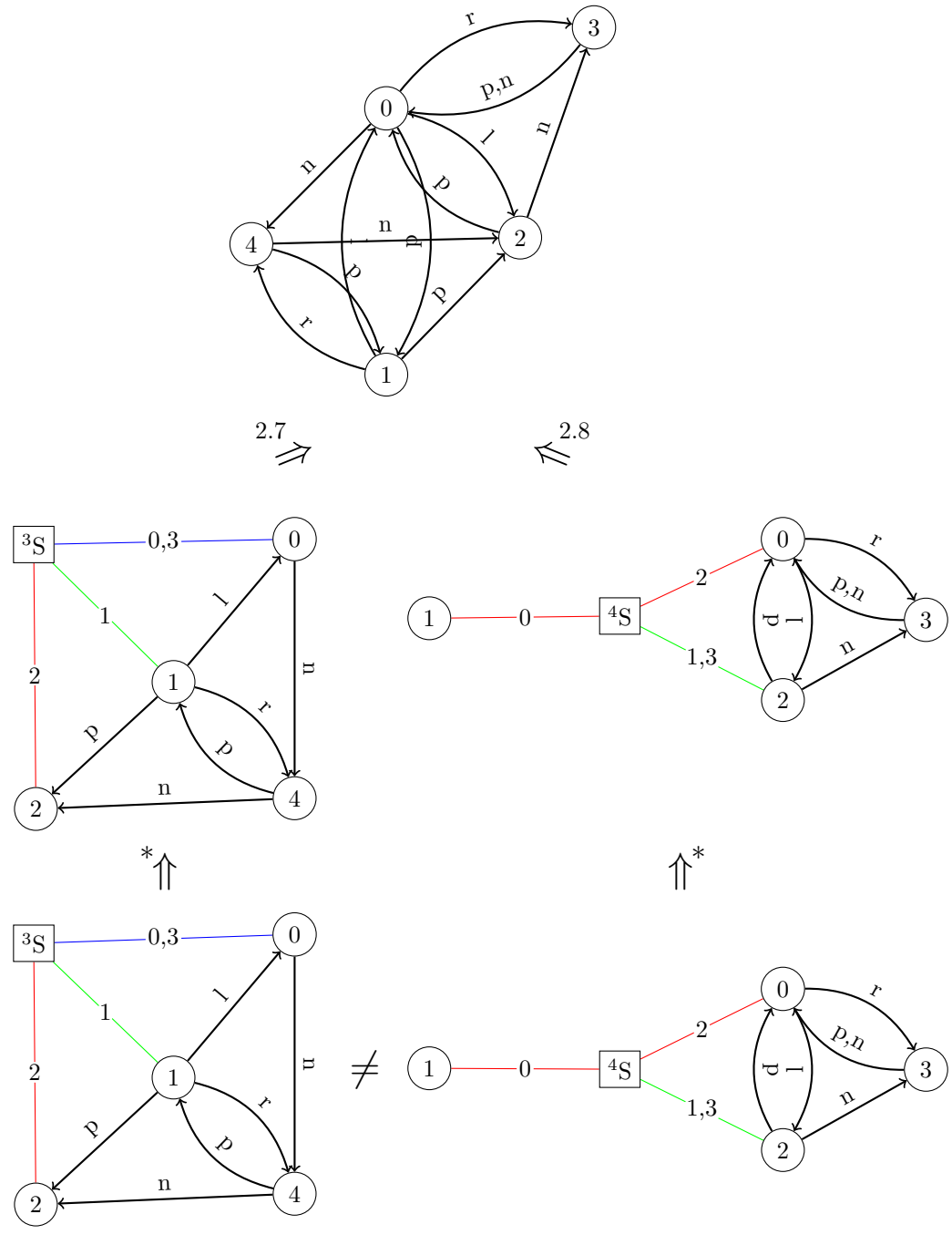


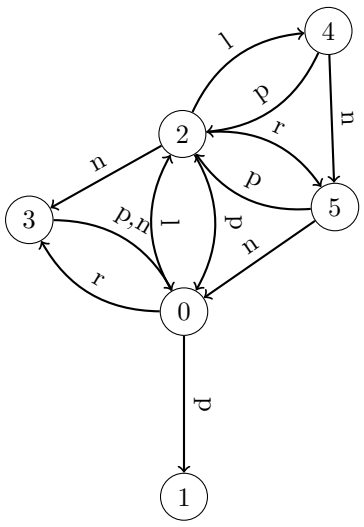
## 1.202 Critical Pair (Not Joinable)



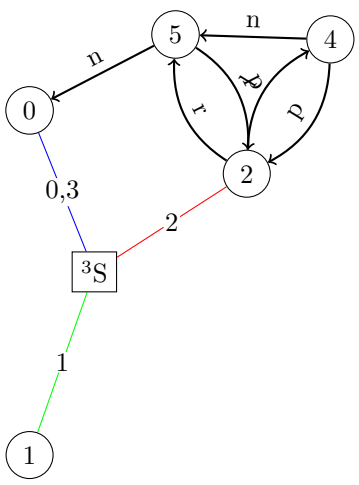
### 1.203 Critical Pair (Not Joinable)

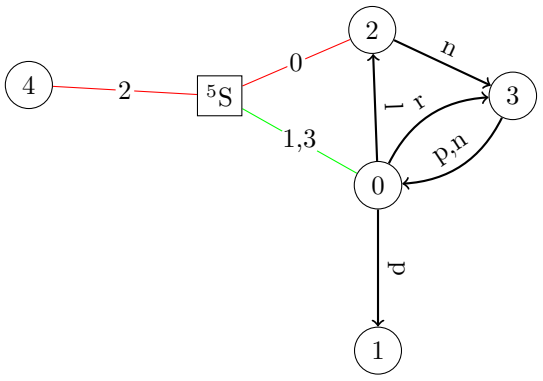


## 1.204 Critical Pair (Not Joinable)




2.7 ⇛ 2.8 ⇚

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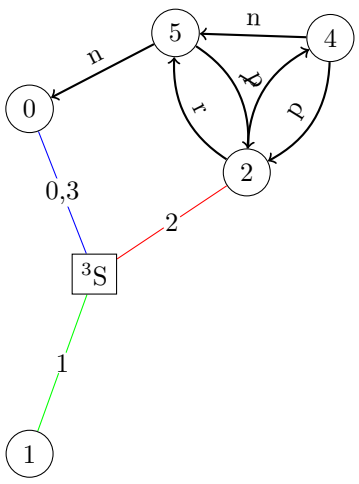
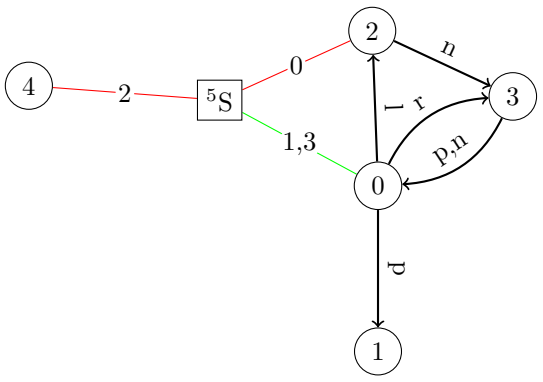
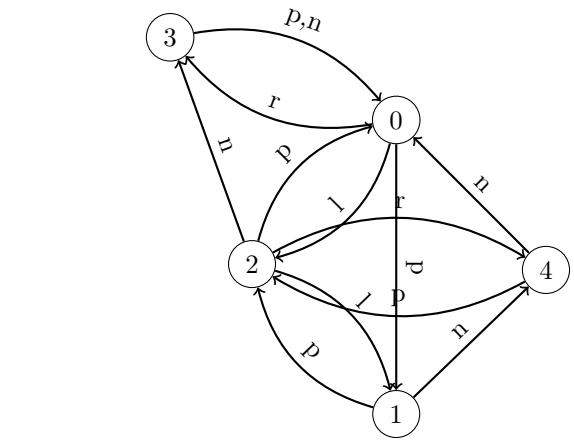
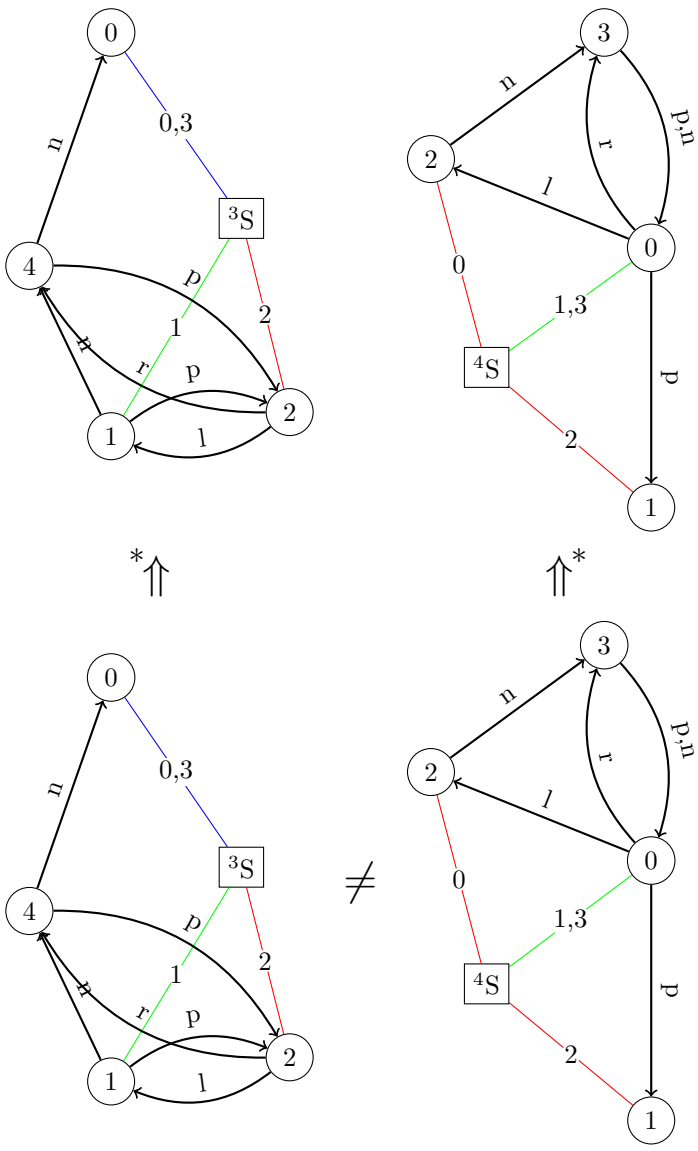


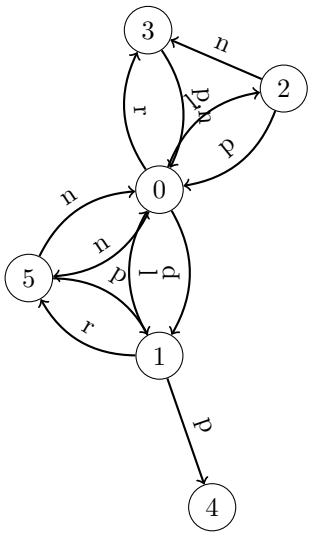
### 1.205 Critical Pair (Not Joinable)



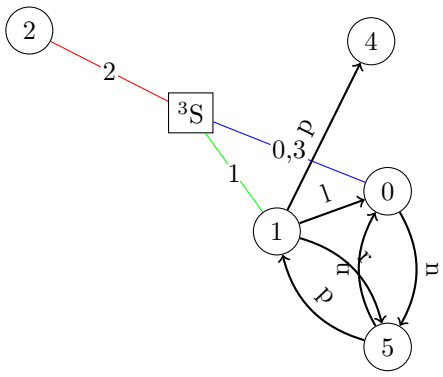

2.7 2.8

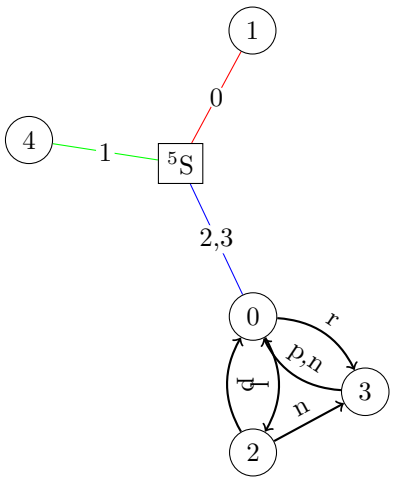


## 1.206 Critical Pair (Not Joinable)




2.7 ⇛ 2.9

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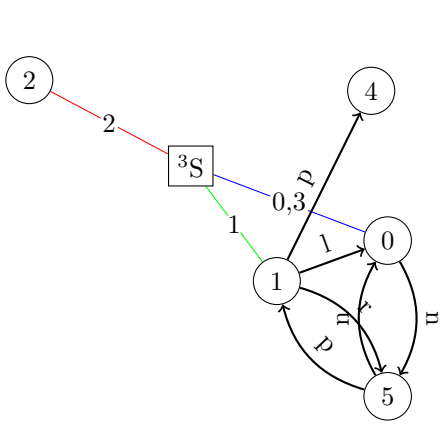


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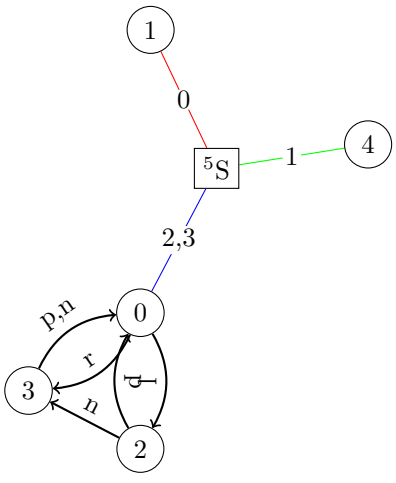
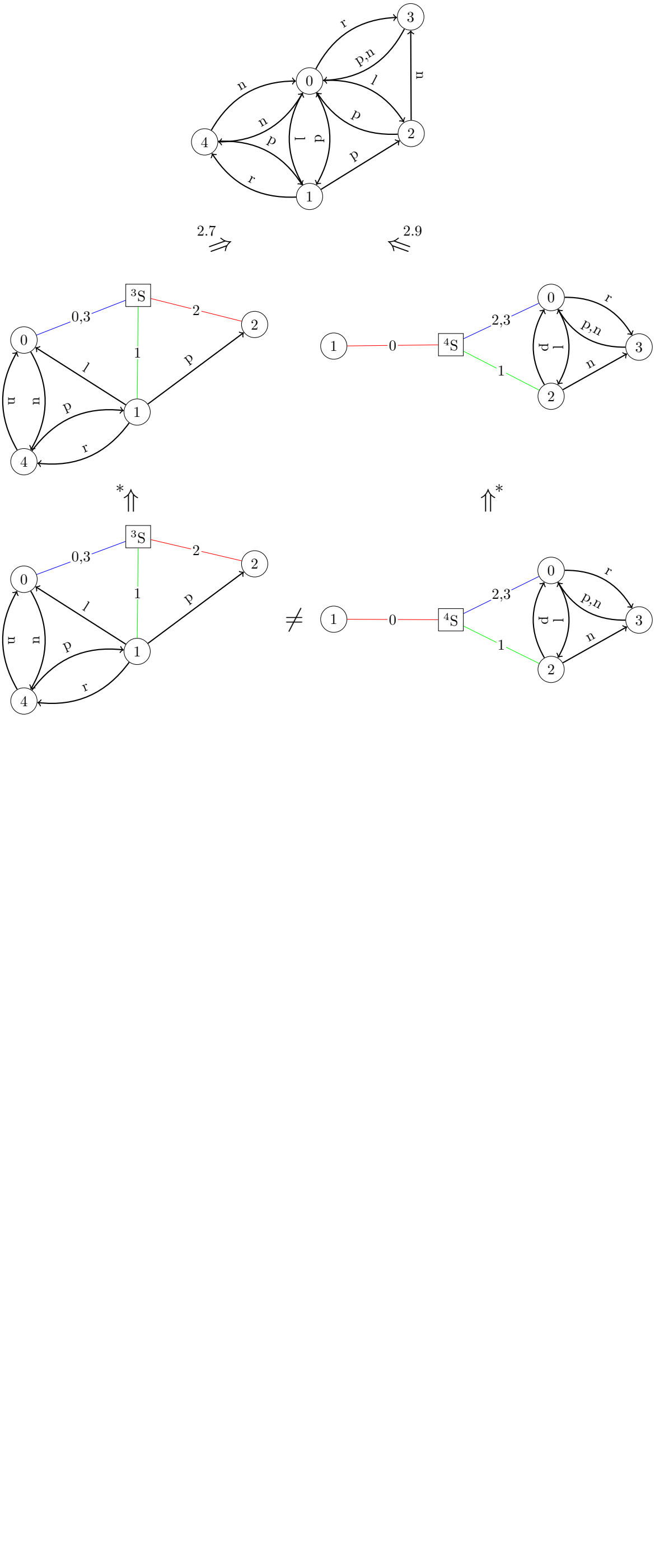
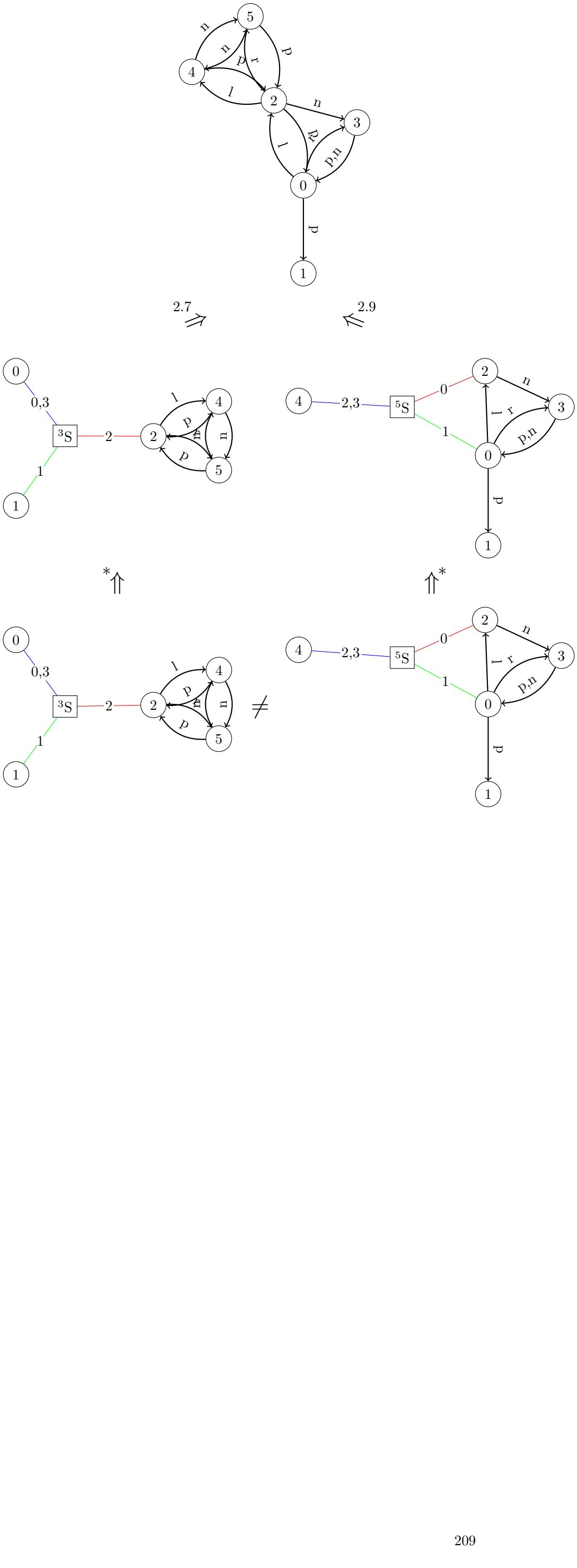


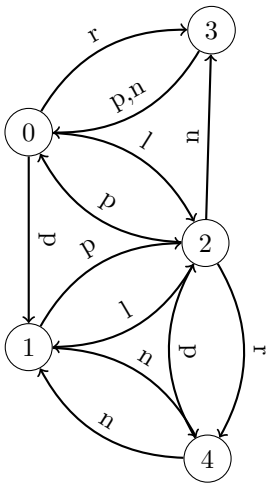
## 1.207 Critical Pair (Not Joinable)



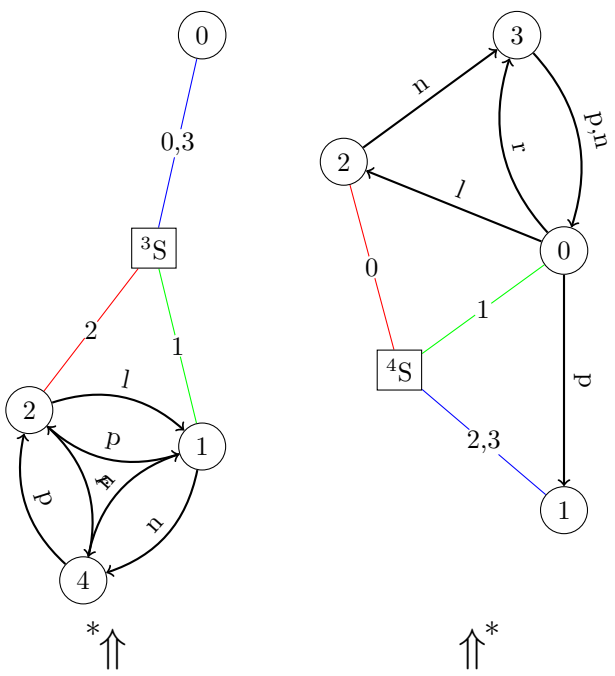
### 1.208 Critical Pair (Not Joinable)

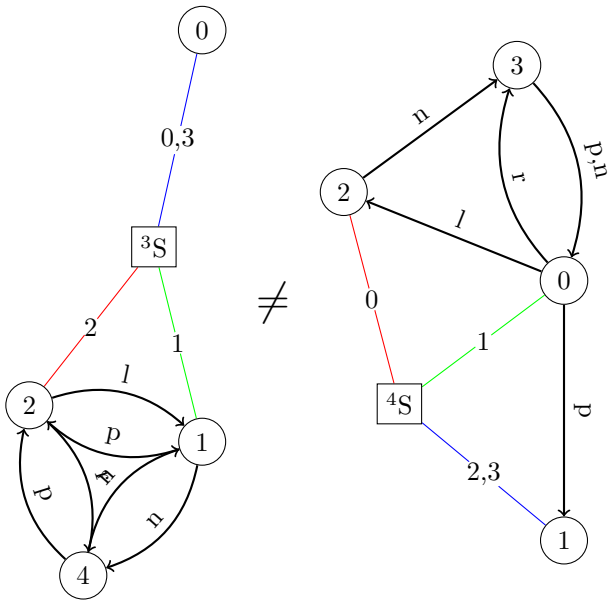


## 1.209 Critical Pair (Not Joinable)

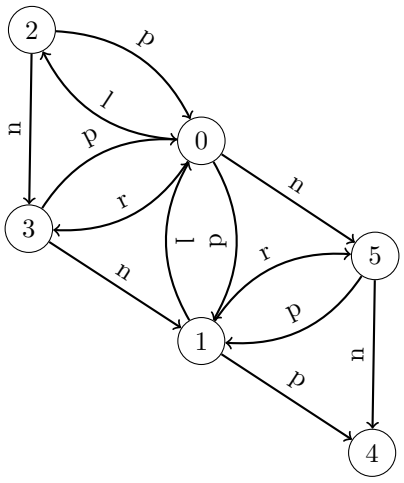



2.7 2.9

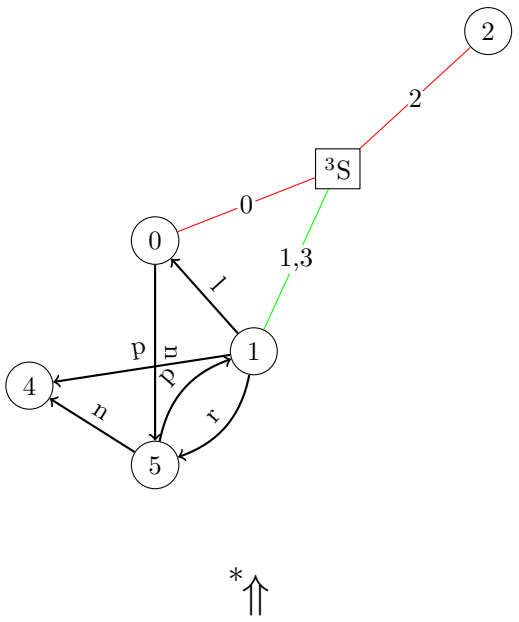


### 1.210 Critical Pair (Not Joinable)




2.8 ⇉ ⇇ 2.8

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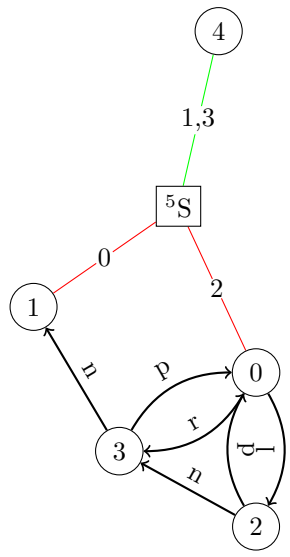


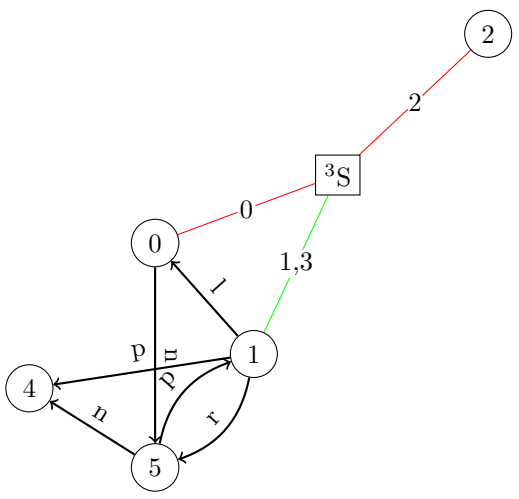


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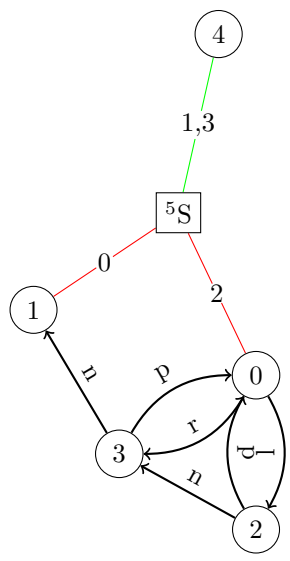
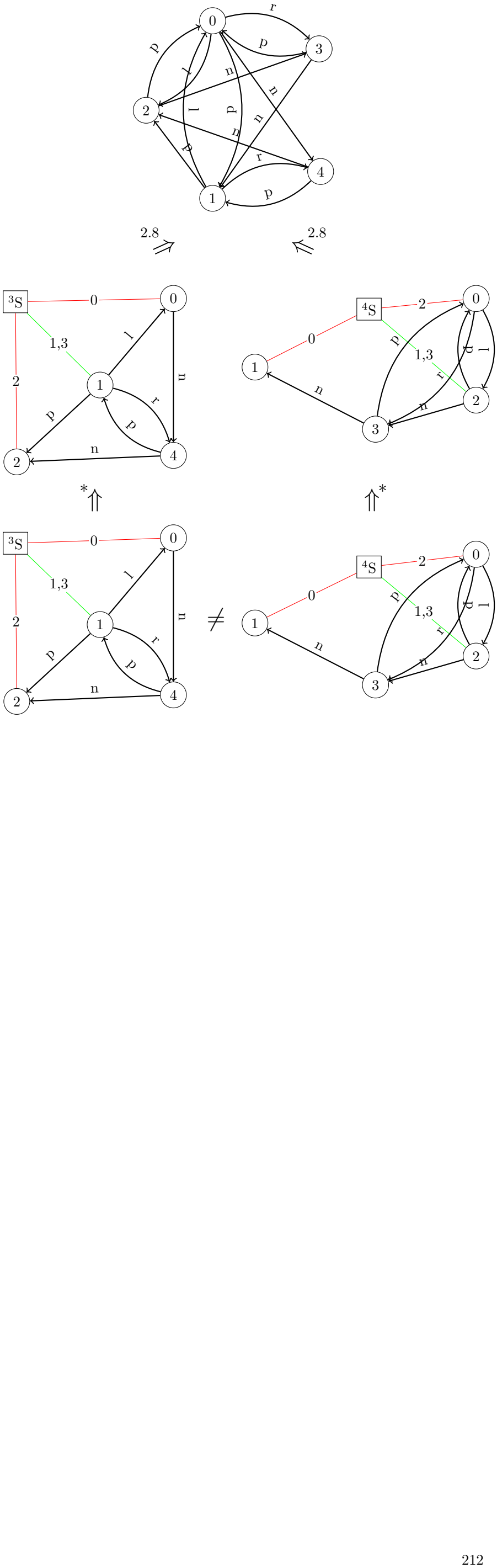
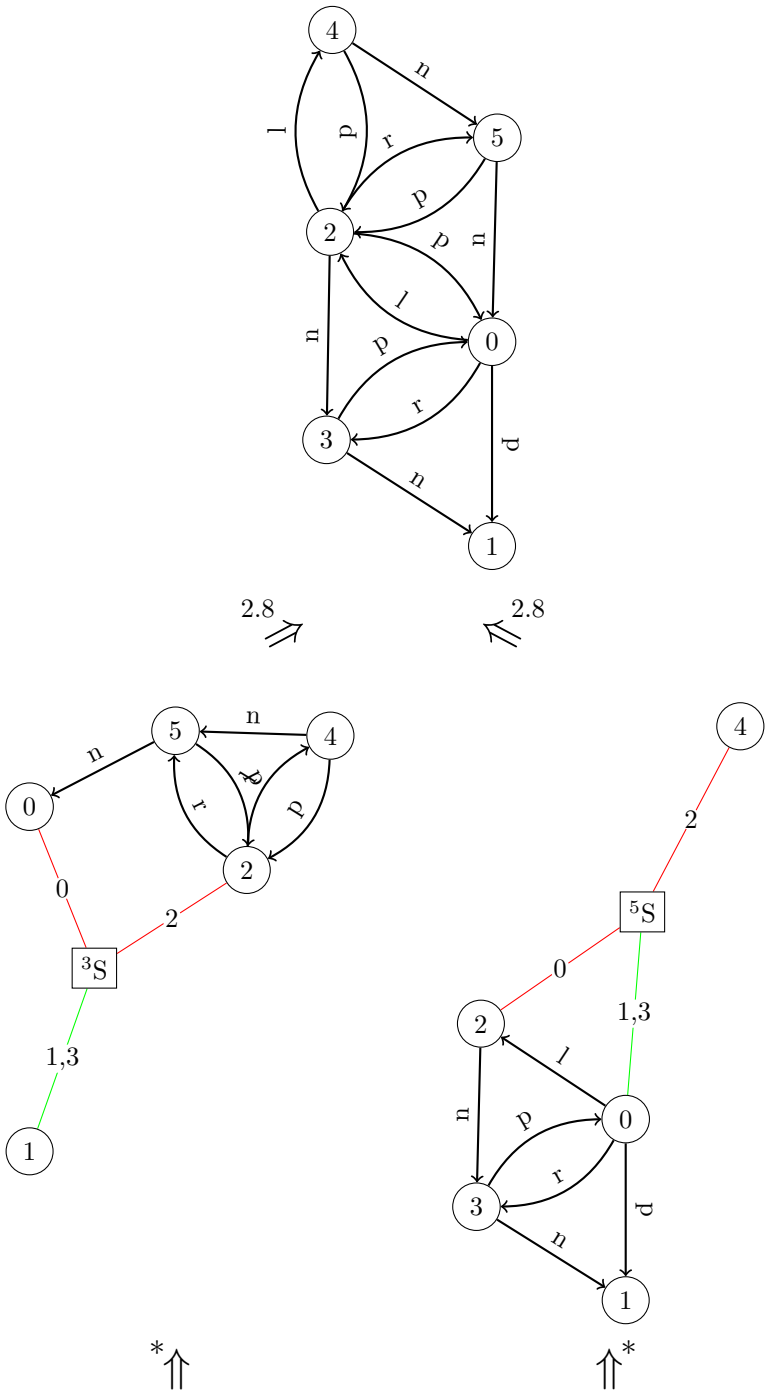
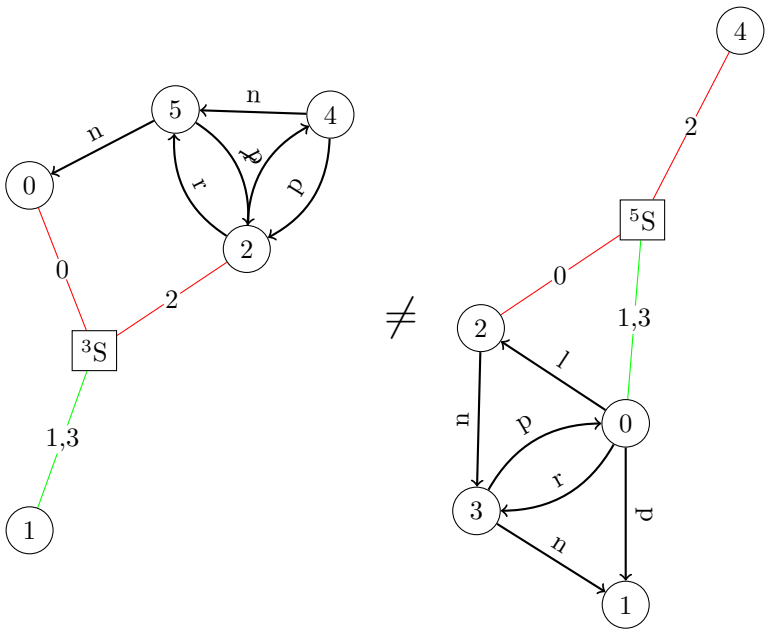


### 1.211 Critical Pair (Not Joinable)

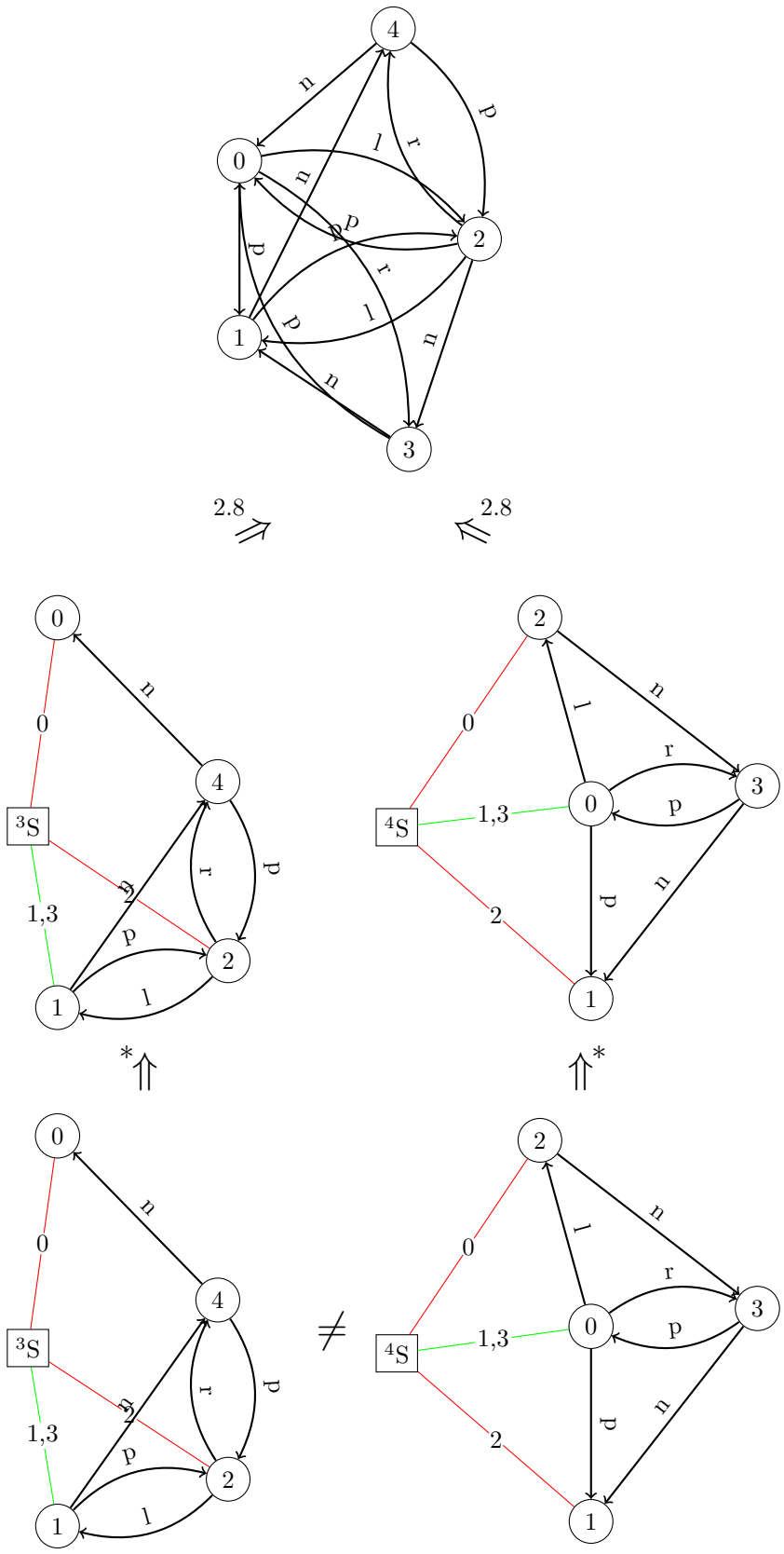


### 1.212 Critical Pair (Not Joinable)



### 1.213 Critical Pair (Not Joinable)



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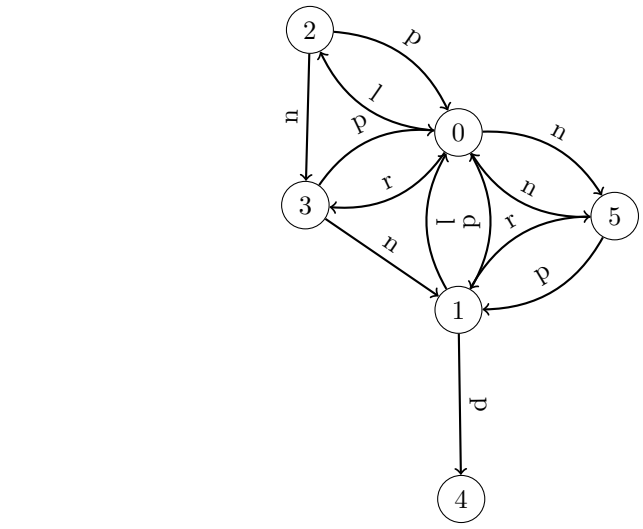
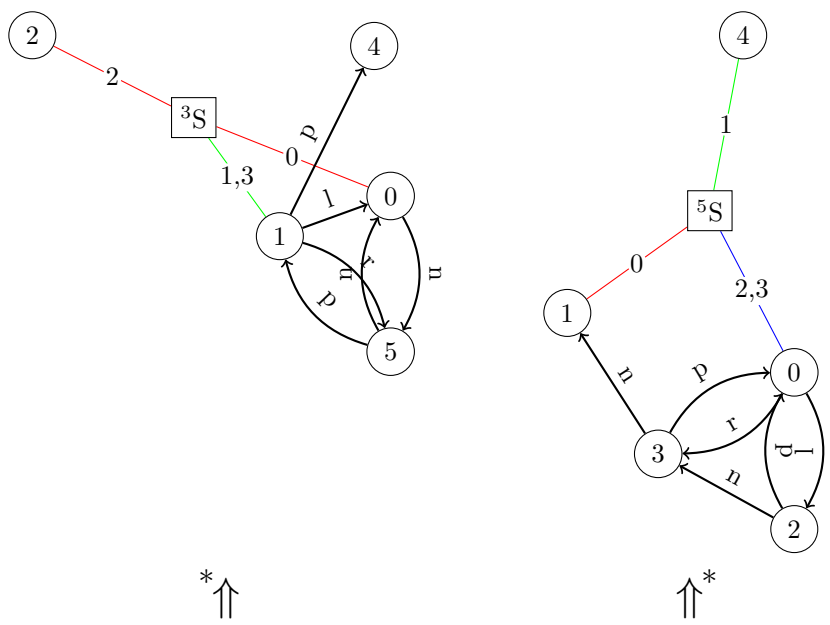



2.8 2.9

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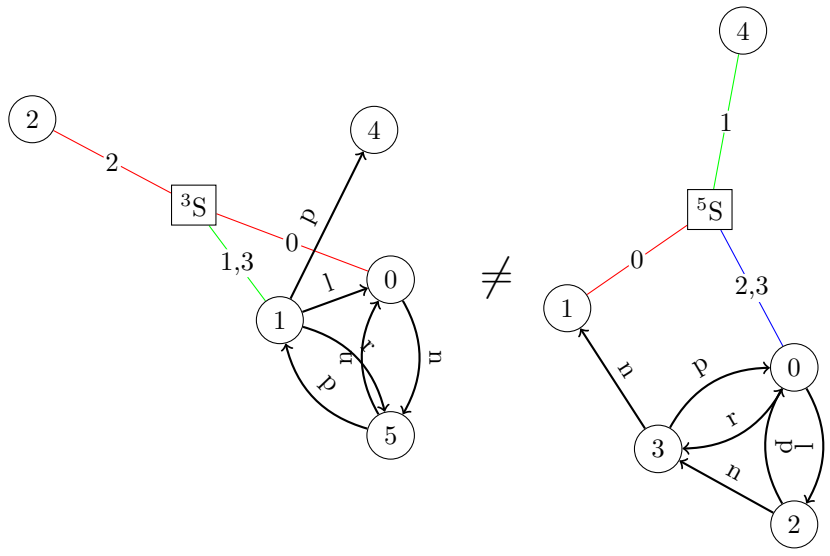
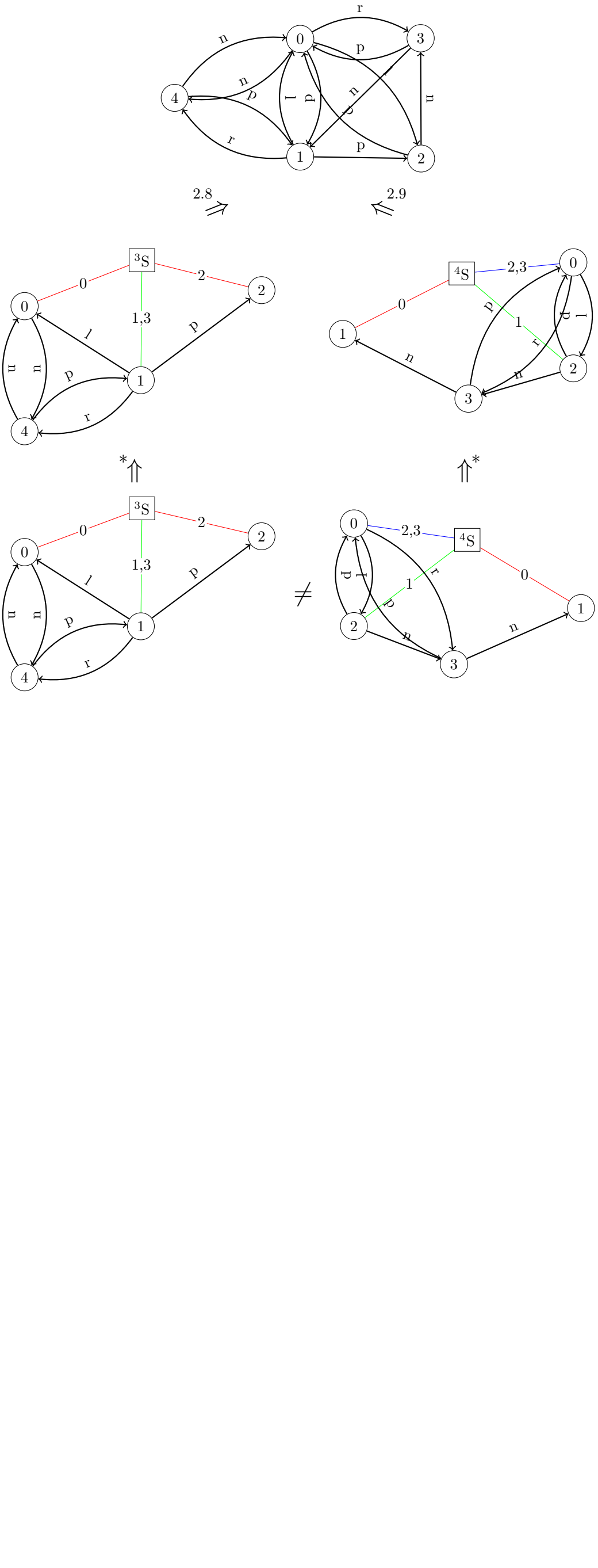
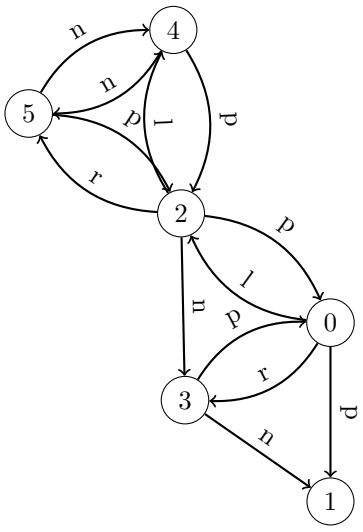


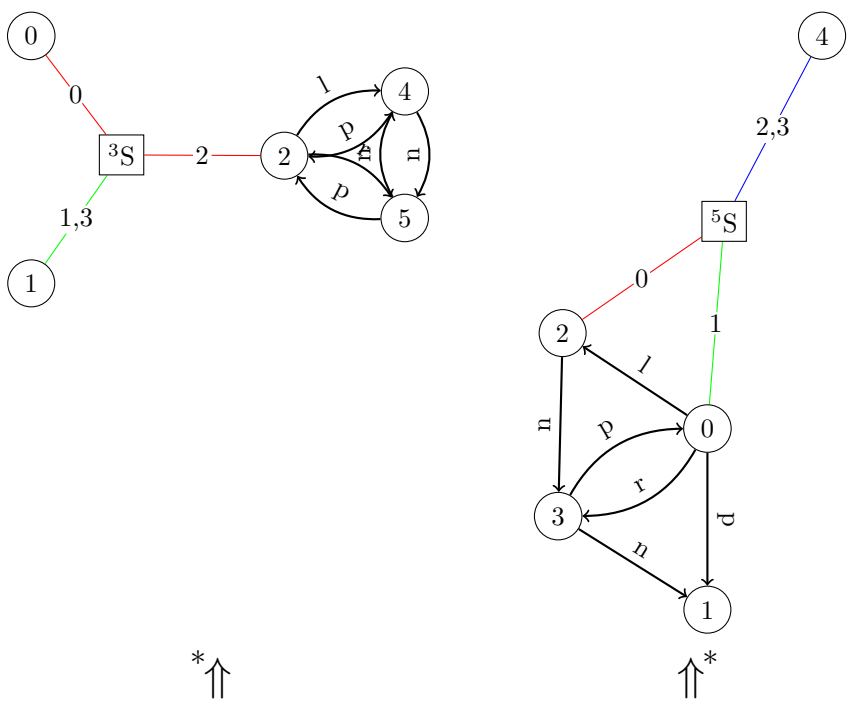
## 1.215 Critical Pair (Not Joinable)



### 1.216 Critical Pair (Not Joinable)




2.8 2.9

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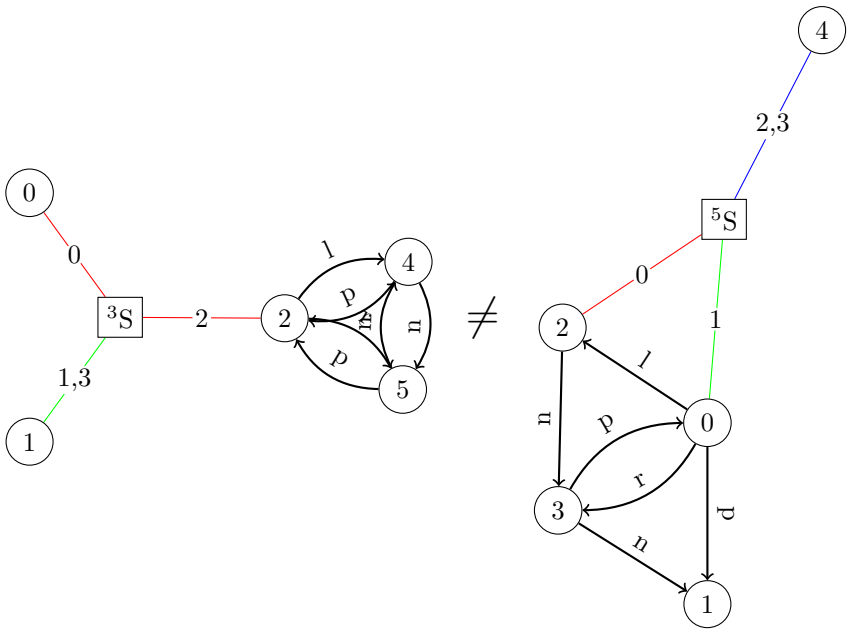

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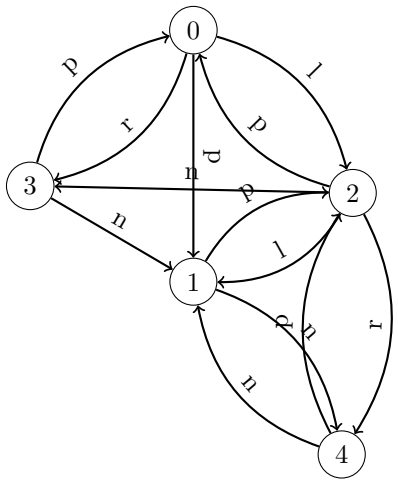
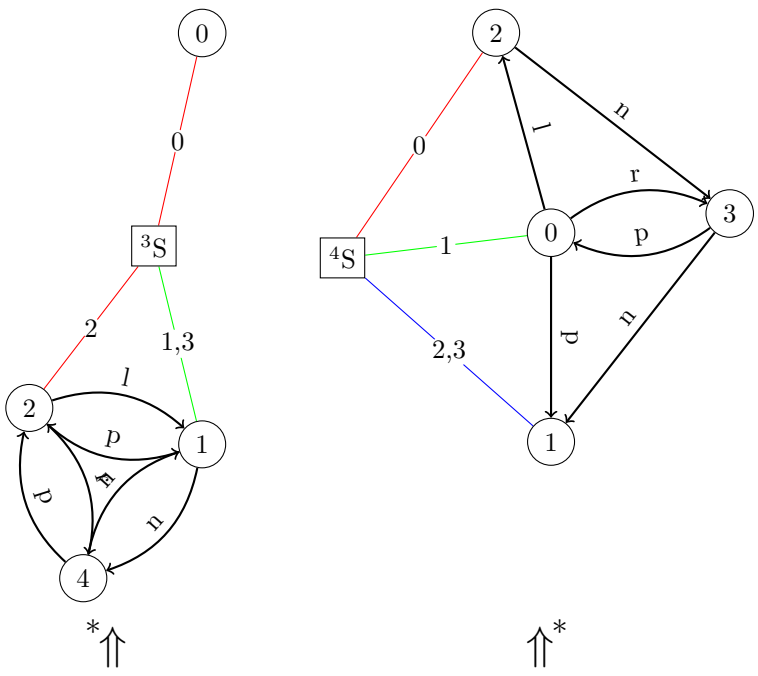
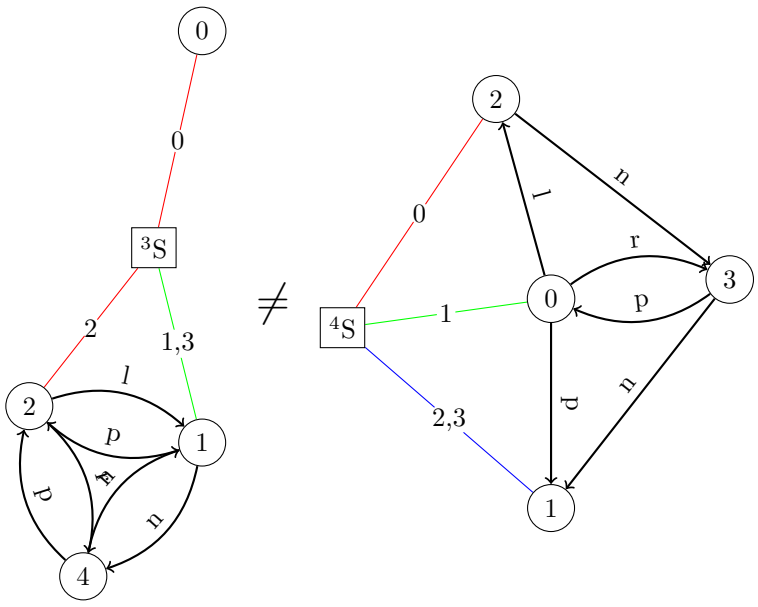
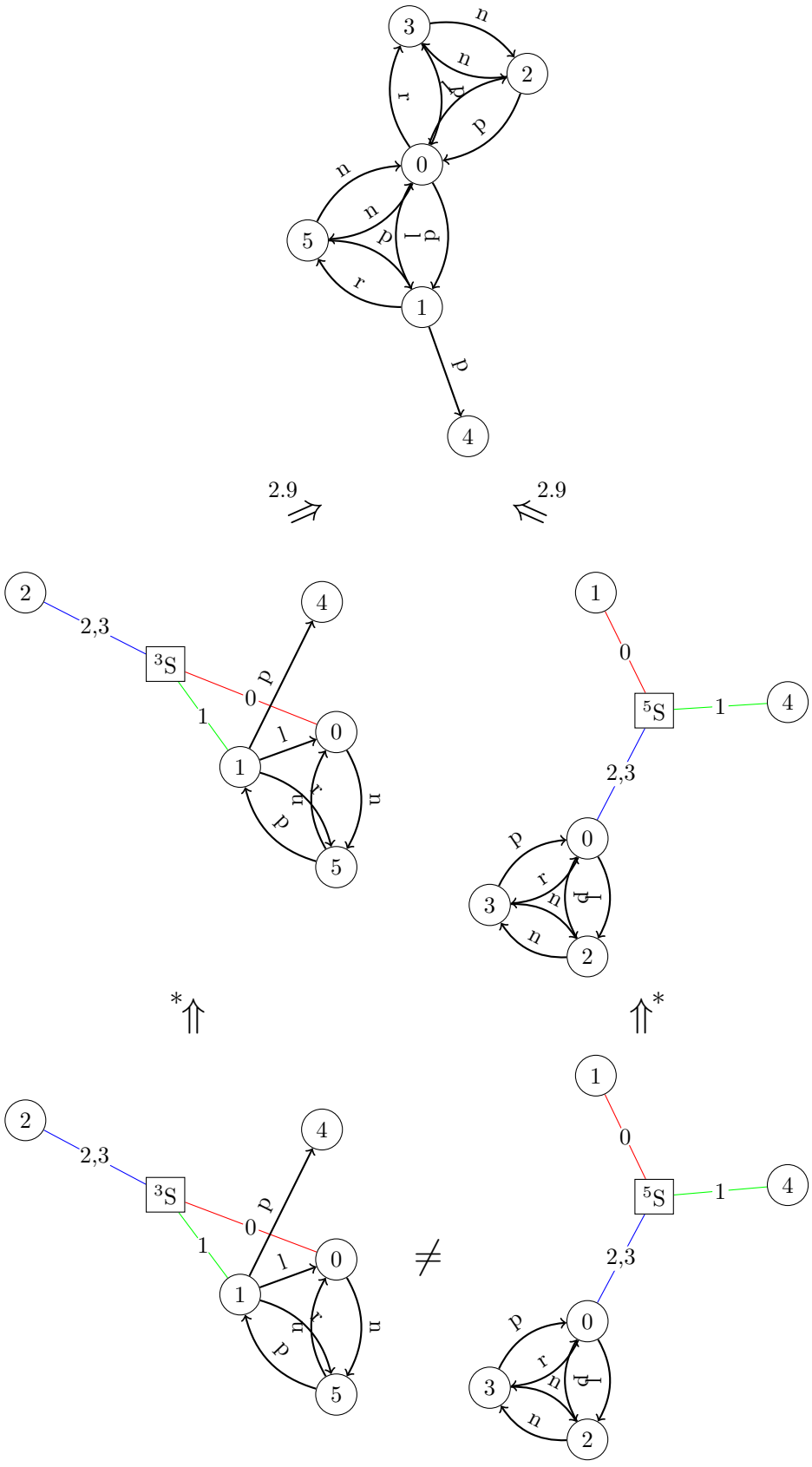



2.8 2.9

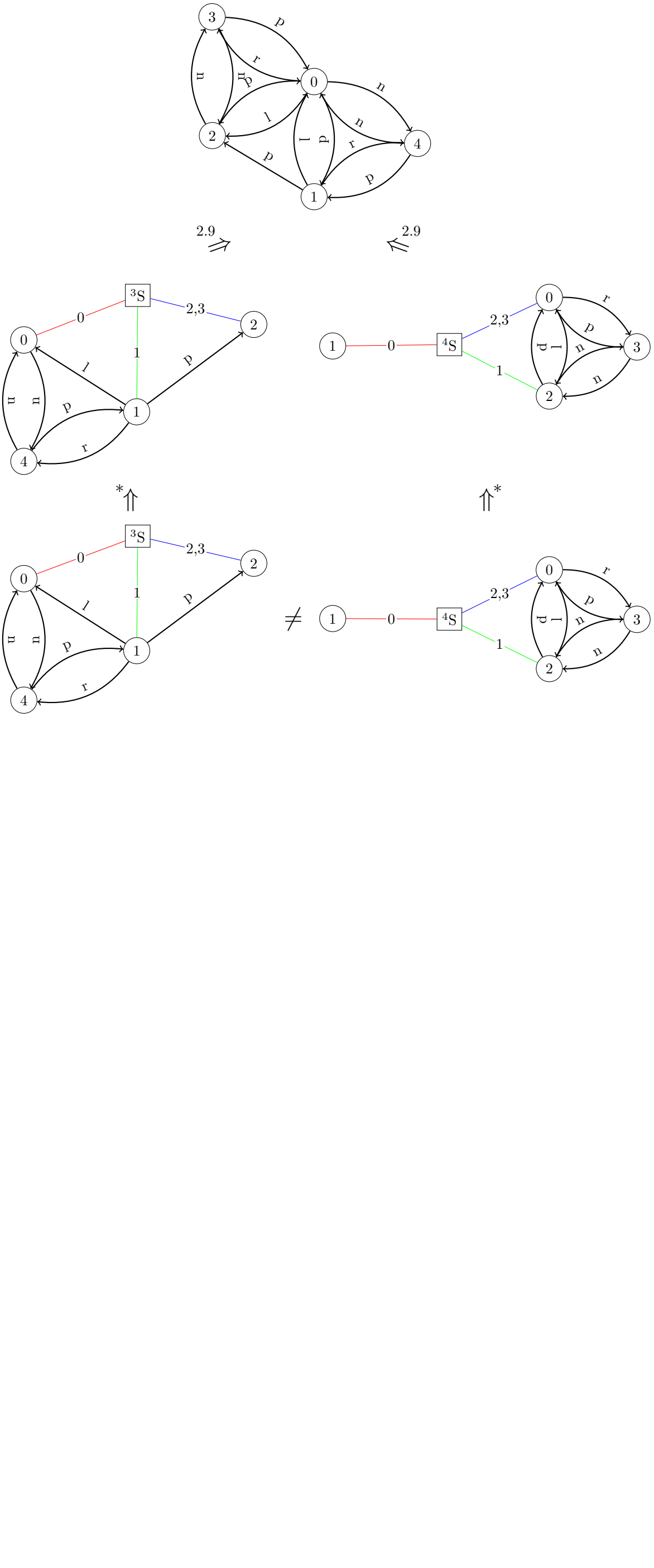


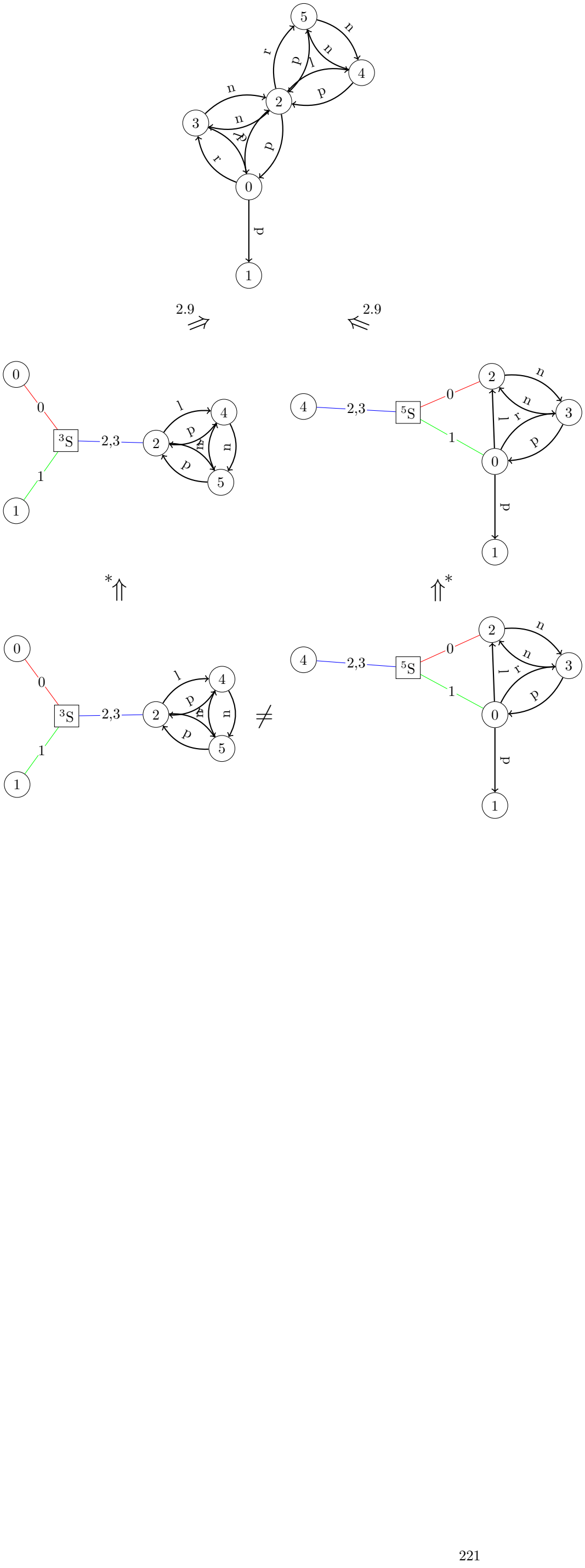
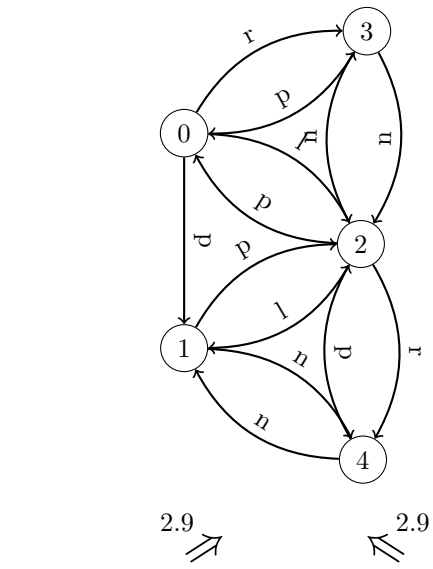
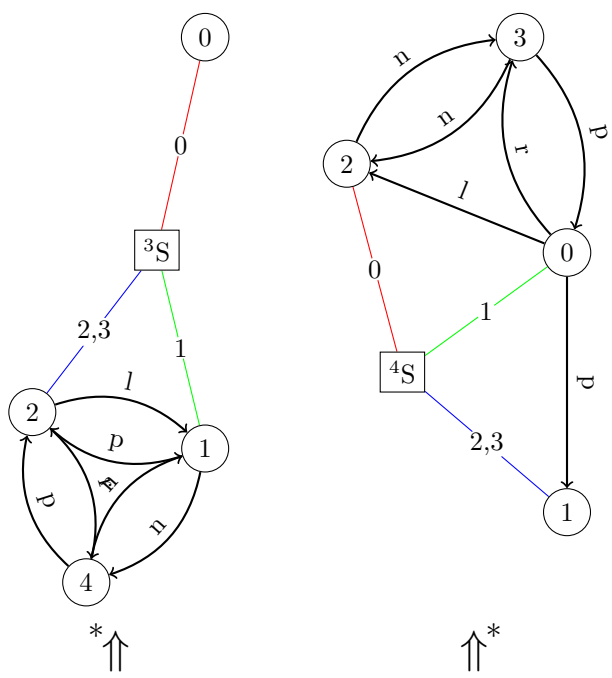
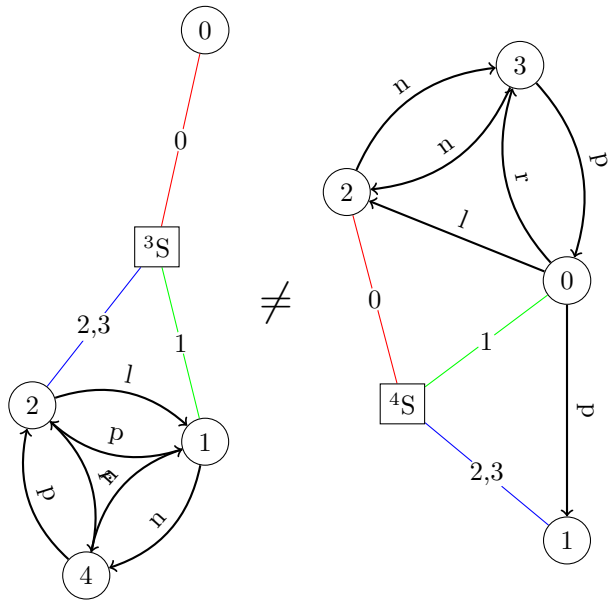
## 1.218 Critical Pair (Not Joinable)



### 1.219 Critical Pair (Not Joinable)



### 1.220 Critical Pair (Not Joinable)



### 1.221 Critical Pair (Not Joinable)