

# Further neural reduction of the upper bound on the number of persons using monoliths

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## Abstract

In this paper, I describe further neural reduction of the upper bound  
on the number of persons using monoliths.  
The paper ends with "The End"

## Introduction

In a previous paper, I've described further neural reduction of the lower and upper  
bounds on the number of persons using a neural architecture called the monolith.

## Further neural reduction of the upper bound on the number of persons using a monolith

First, we note that  $24 = 12 \times 2 \times 1$  and  $24 = 12 + 2 + 1$   
As before, the  $M_{12,2,1}$  monolith is the complete 15-partite graph with the **vertices**  
representing persons, the **rungs** representing rank and the **upward edges**  
representing transfer of knowledge to the ranks above.  
Since the  $M_{12,2,1}$  monolith can have no more than 15 vertices,  
the upper bound on the number of persons is reduced to 15.

## Further neural reduction of the upper bound on the number of persons using a monolith

Second, we note that  $15 = 5 \times 3$  and  $8 = 5 + 3$   
As before, the  $M_{5,3}$  monolith is the complete 8-partite graph with the **vertices**  
representing persons, the **rungs** representing rank and the **upward edges**  
representing transfer of knowledge to the ranks above.  
Since the  $M_{5,3}$  monolith can have no more than 8 vertices,  
the upper bound on the number of persons is reduced to 8.

## Further neural reduction of the upper bound on the number of persons using a monolith

Third, we note that  $8 = 4 \times 2$  and  $6 = 4 + 2$

As before, the  $M_{4,2}$  monolith is the complete 6-partite graph with the **vertices** representing persons, the **rungs** representing rank and the **upward edges** representing transfer of knowledge to the ranks above.

Since the  $M_{4,2}$  monolith can have no more than 6 vertices,  
the upper bound on the number of persons is reduced to 6.

## Further neural reduction of the upper bound on the number of persons using a monolith

Fourth, we note that  $6 = 3 \times 2$  and  $5 = 3 + 2$

As before, the  $M_{3,2}$  monolith is the complete 5-partite graph with the **vertices** representing persons, the **rungs** representing rank and the **upward edges** representing transfer of knowledge to the ranks above.

Since the  $M_{3,2}$  monolith can have no more than 5 vertices,  
the upper bound on the number of persons is reduced to 5.

## Conclusion

Therefore, by repeated use of four different monoliths, we reduce  
the upper bound on the number of persons to 5.

## The End