

# Od Pascalovega do Leibnizovega trikotnika

**Mag. Sonja Rajh**

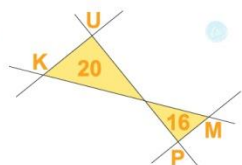
Zavod RS za šolstvo



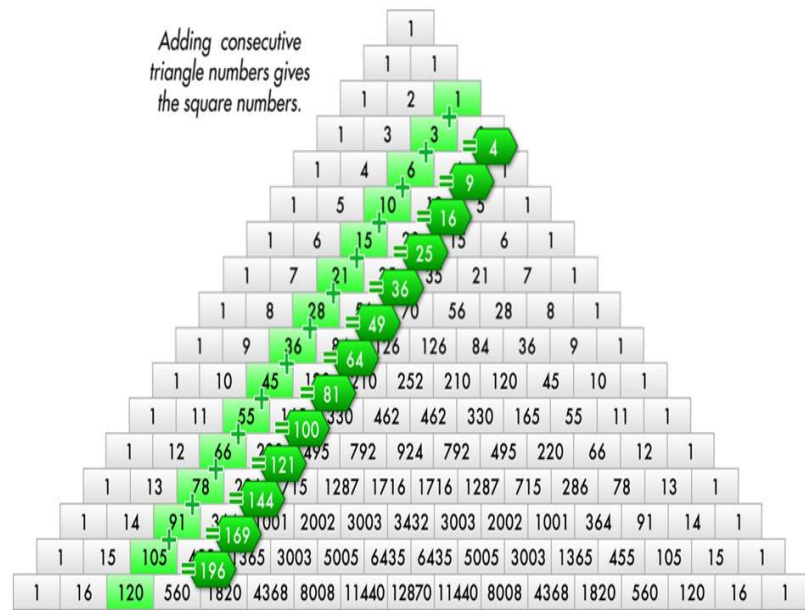
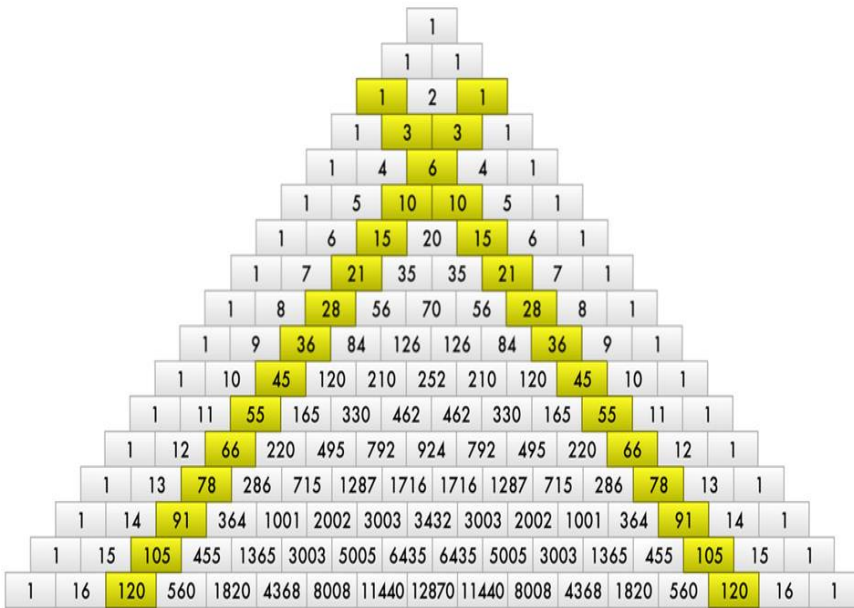
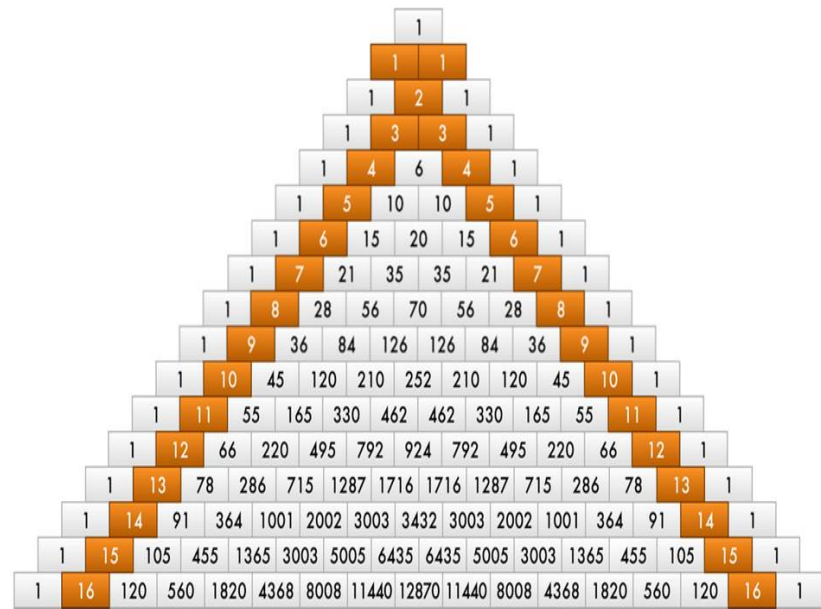
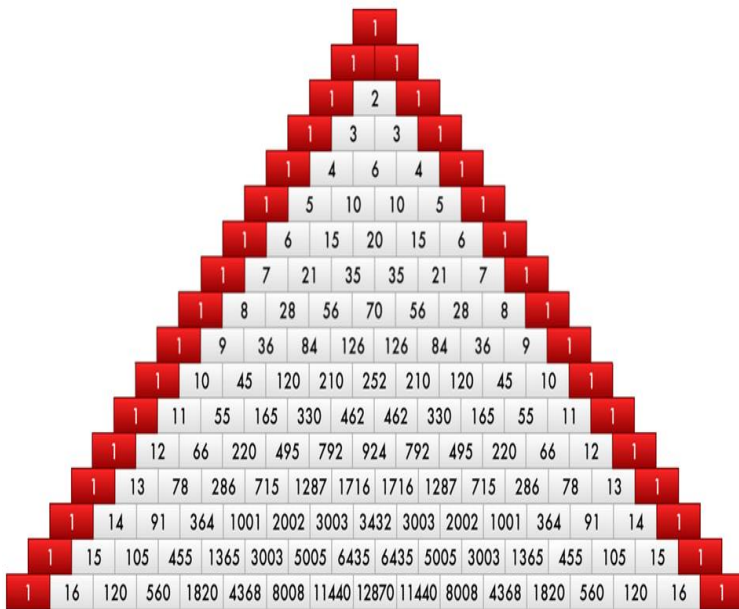
# Pascalov trikotnik



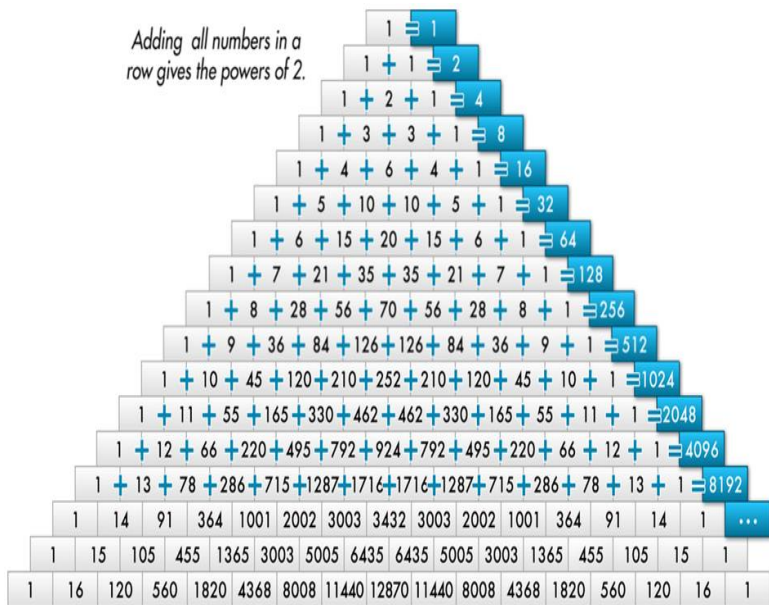
<https://www.youtube.com/watch?v=YUqHdxxdbyM>



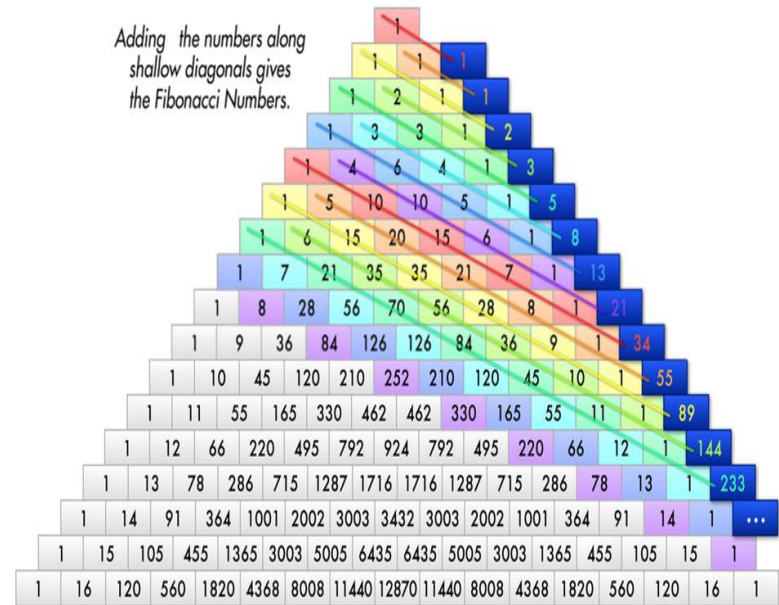
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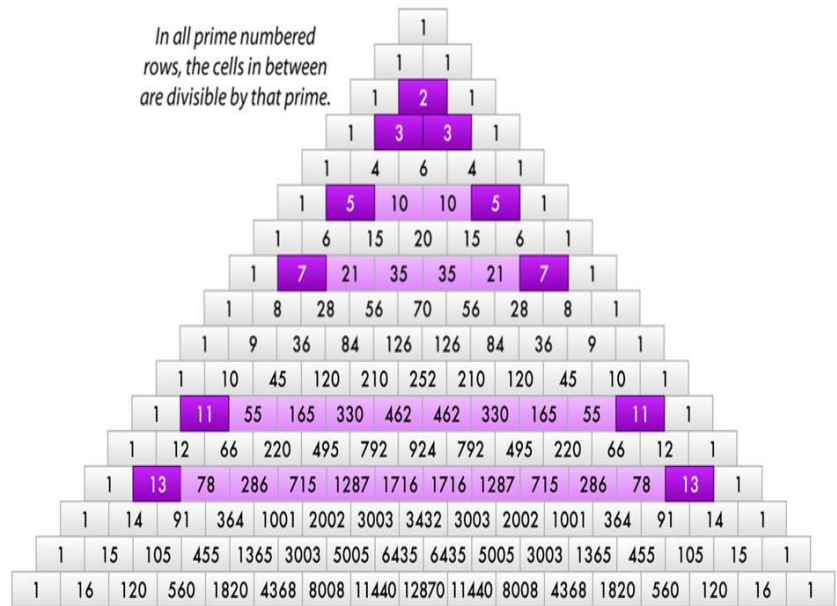
Adding all numbers in a row gives the powers of 2.



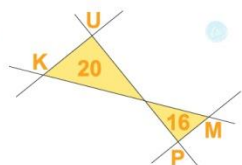
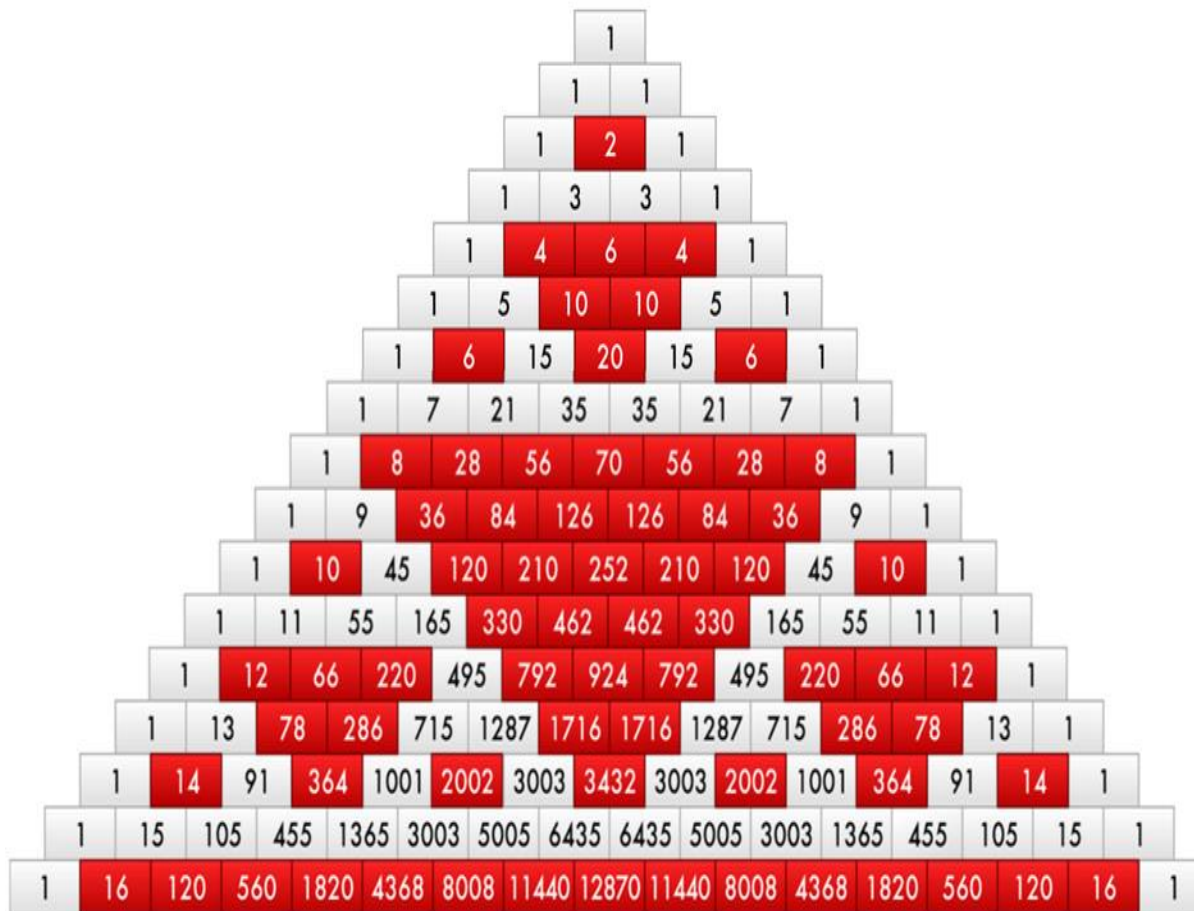
Adding the numbers along shallow diagonals gives the Fibonacci Numbers.



In all prime numbered rows, the cells in between are divisible by that prime.

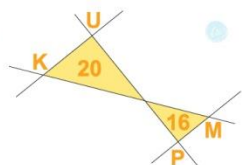
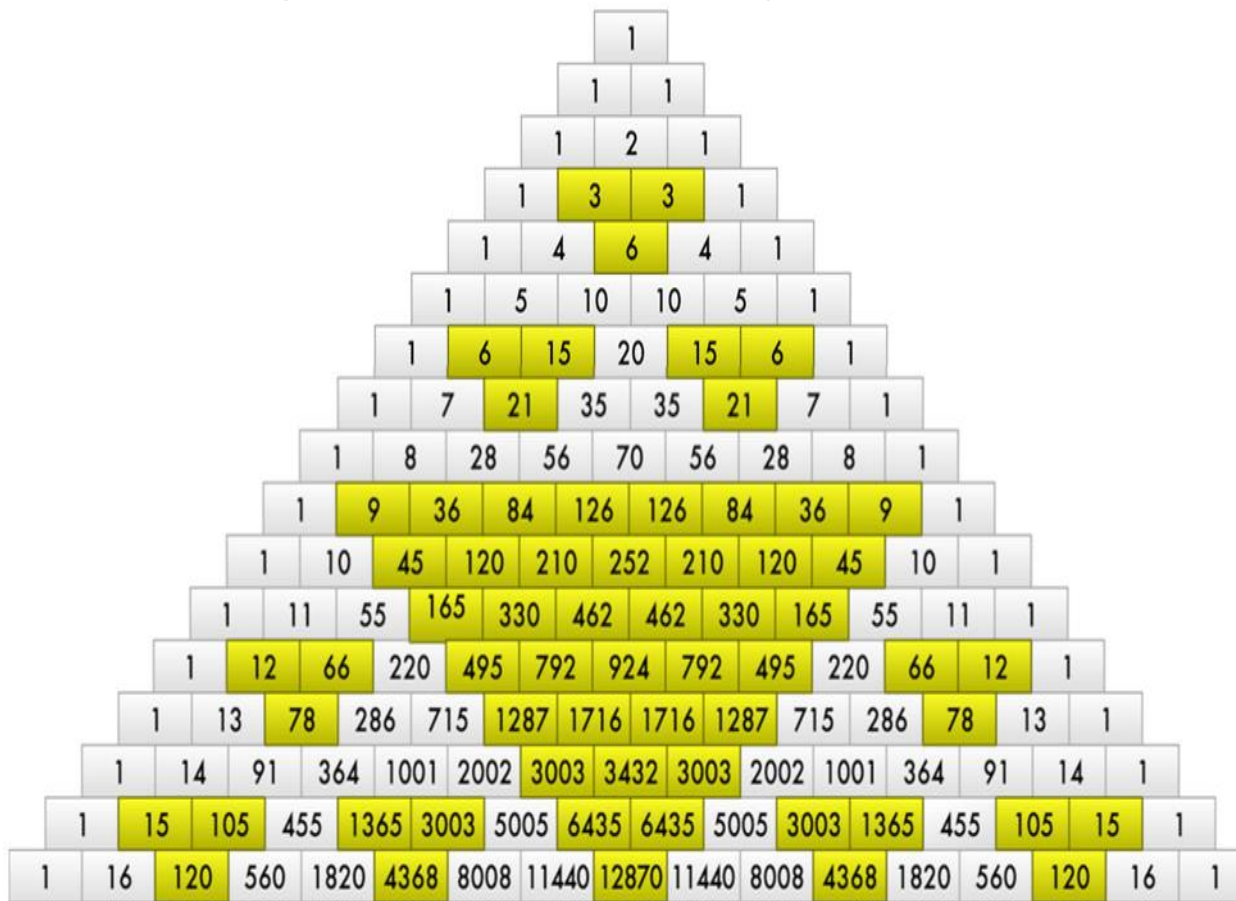


V shemi Pascalovega trikotnika pobarvajte večkratnike števila 2.



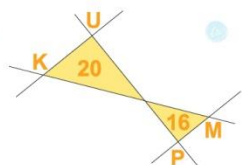
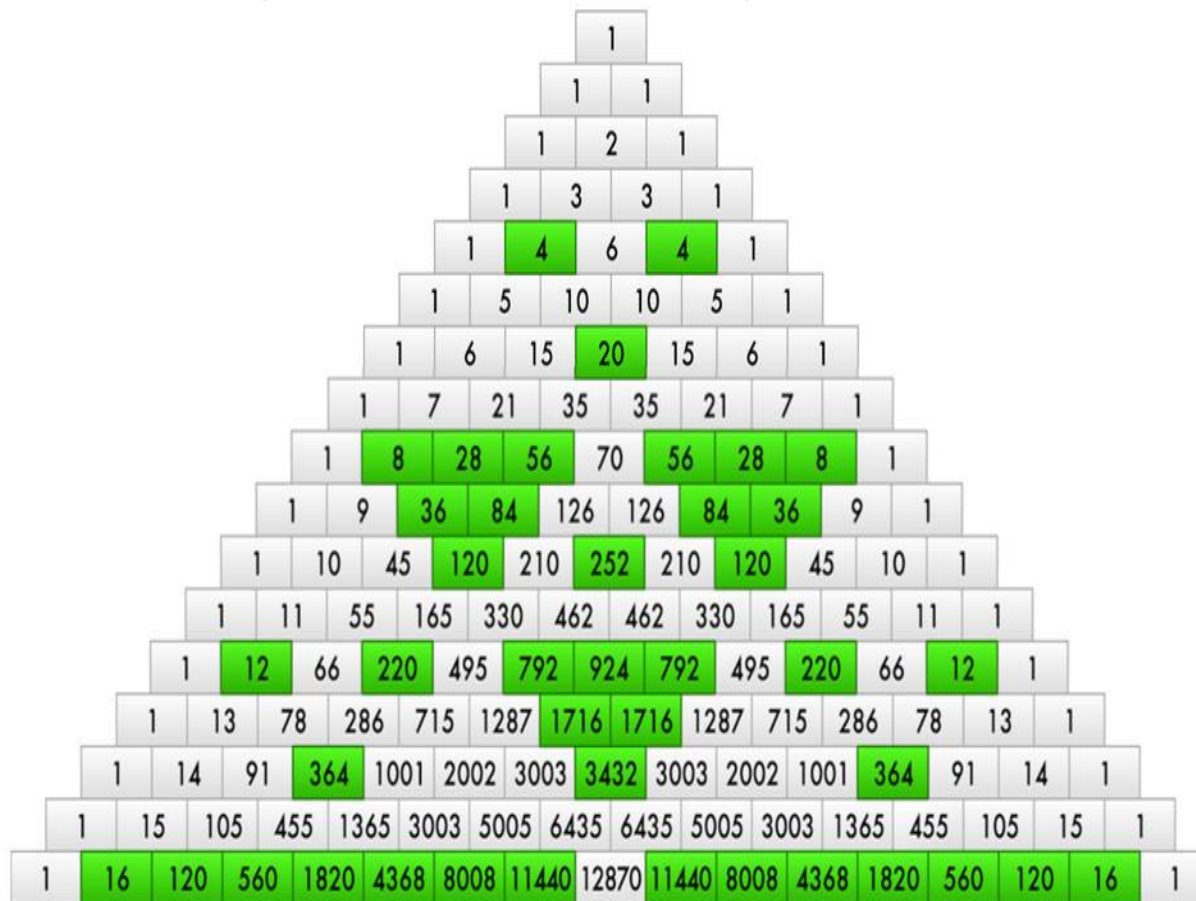
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V shemi Pascalovega trikotnika pobarvajte večkratnike števila 3.



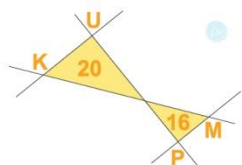
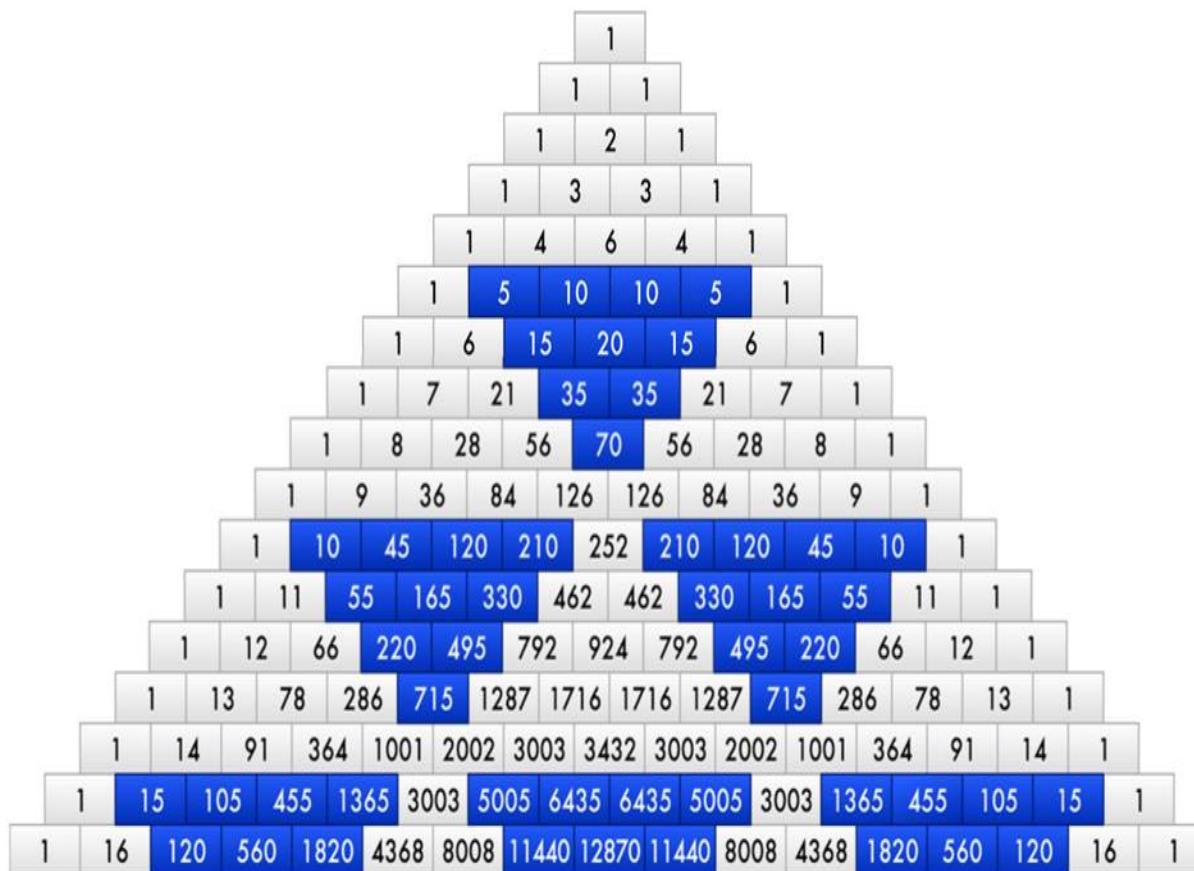
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V shemi Pascalovega trikotnika pobarvajte večkratnike števila 4.



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V shemi Pascalovega trikotnika pobarvajte večkratnike števila 5.



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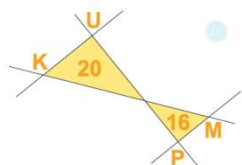


# Trikotnik Sierpinskega



[https://www.google.si/search?q=Trikotnik+Sierpinskega&biw=1178&bih=516&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjn\\_uqcm6bQAhUBCywKHUbhB14QsAQIlw&dpr=1.16#imgdii=MnRNIMdYQrP7CM%3A%3BMnRNIMdYQrP7CM%3A%3Bzft4qdur\\_EOTuM%3A&imgrc=MnRNIMdYQrP7CM%3A](https://www.google.si/search?q=Trikotnik+Sierpinskega&biw=1178&bih=516&tbm=isch&tbo=u&source=univ&sa=X&ved=0ahUKEwjn_uqcm6bQAhUBCywKHUbhB14QsAQIlw&dpr=1.16#imgdii=MnRNIMdYQrP7CM%3A%3BMnRNIMdYQrP7CM%3A%3Bzft4qdur_EOTuM%3A&imgrc=MnRNIMdYQrP7CM%3A)

<http://math.bu.edu/DYSYS/>



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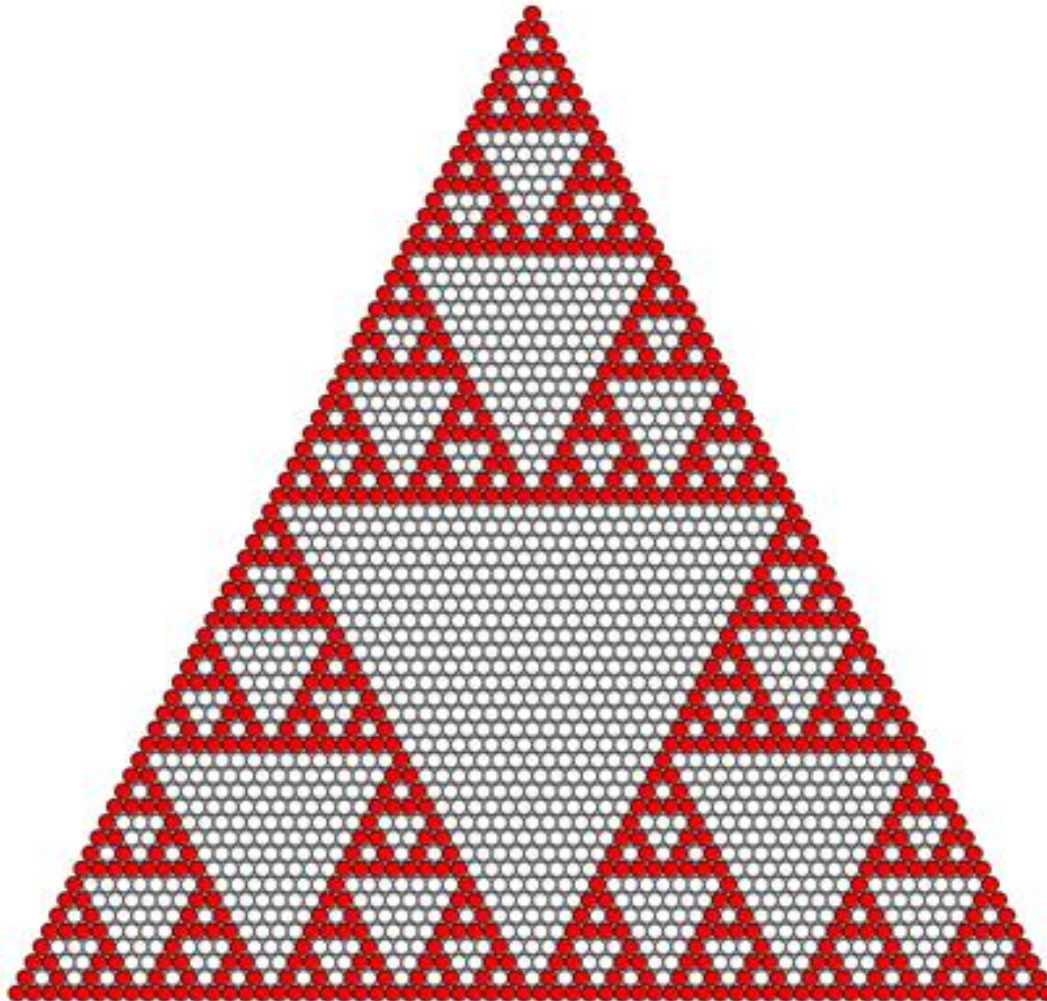
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# Pascalov trikotnik

Ostanek pri deljenju z 2



Modulus

< 2 >

# Rows

< 64 >

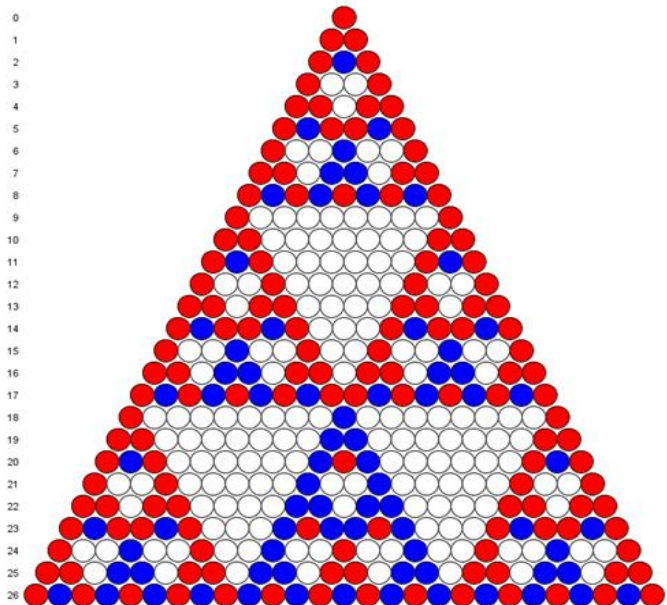
Show digits

Right triangle

Pascal

Leibnitz

# Pascalov trikotnik



Modulus:

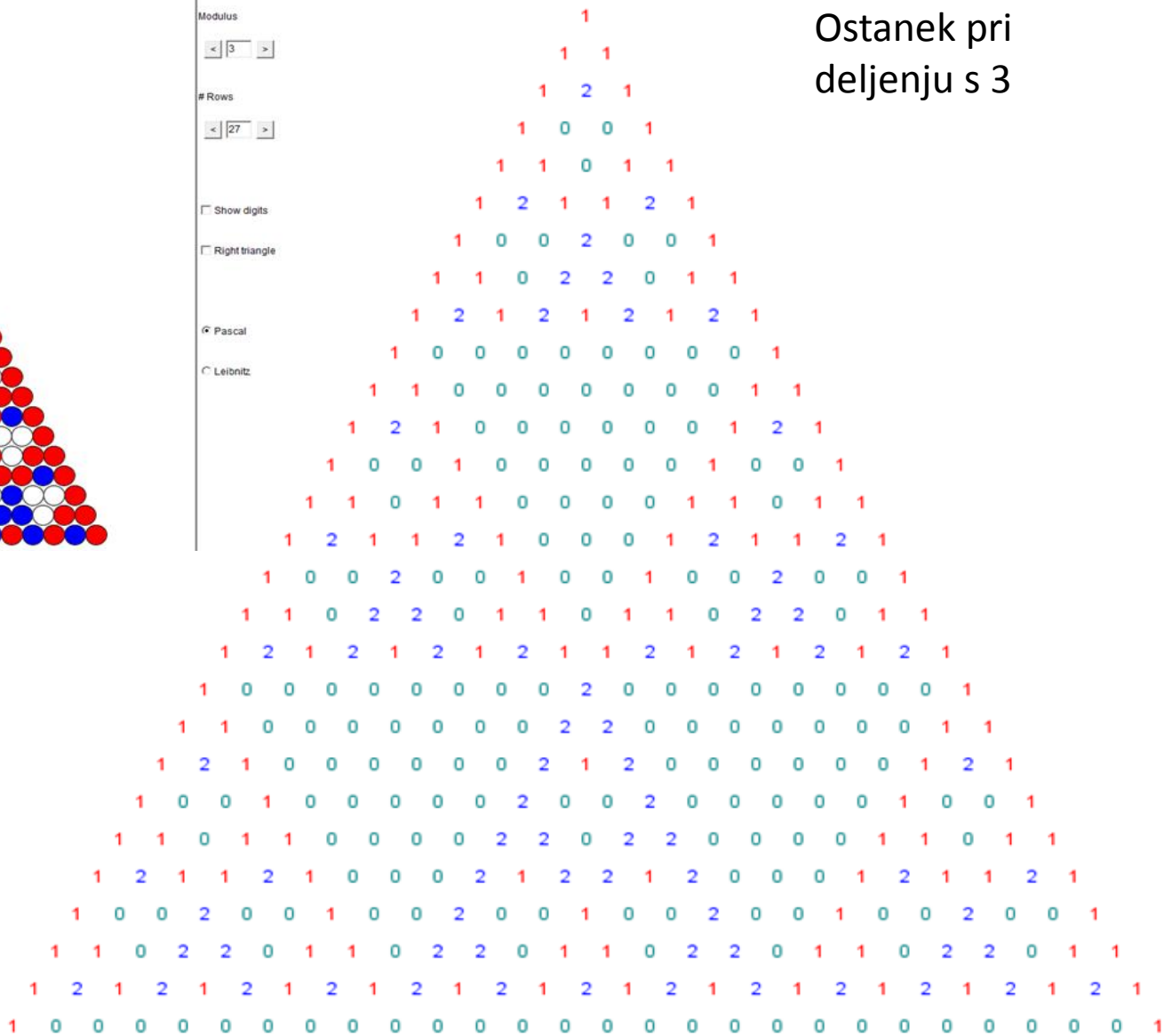
# Rows:

Show digits

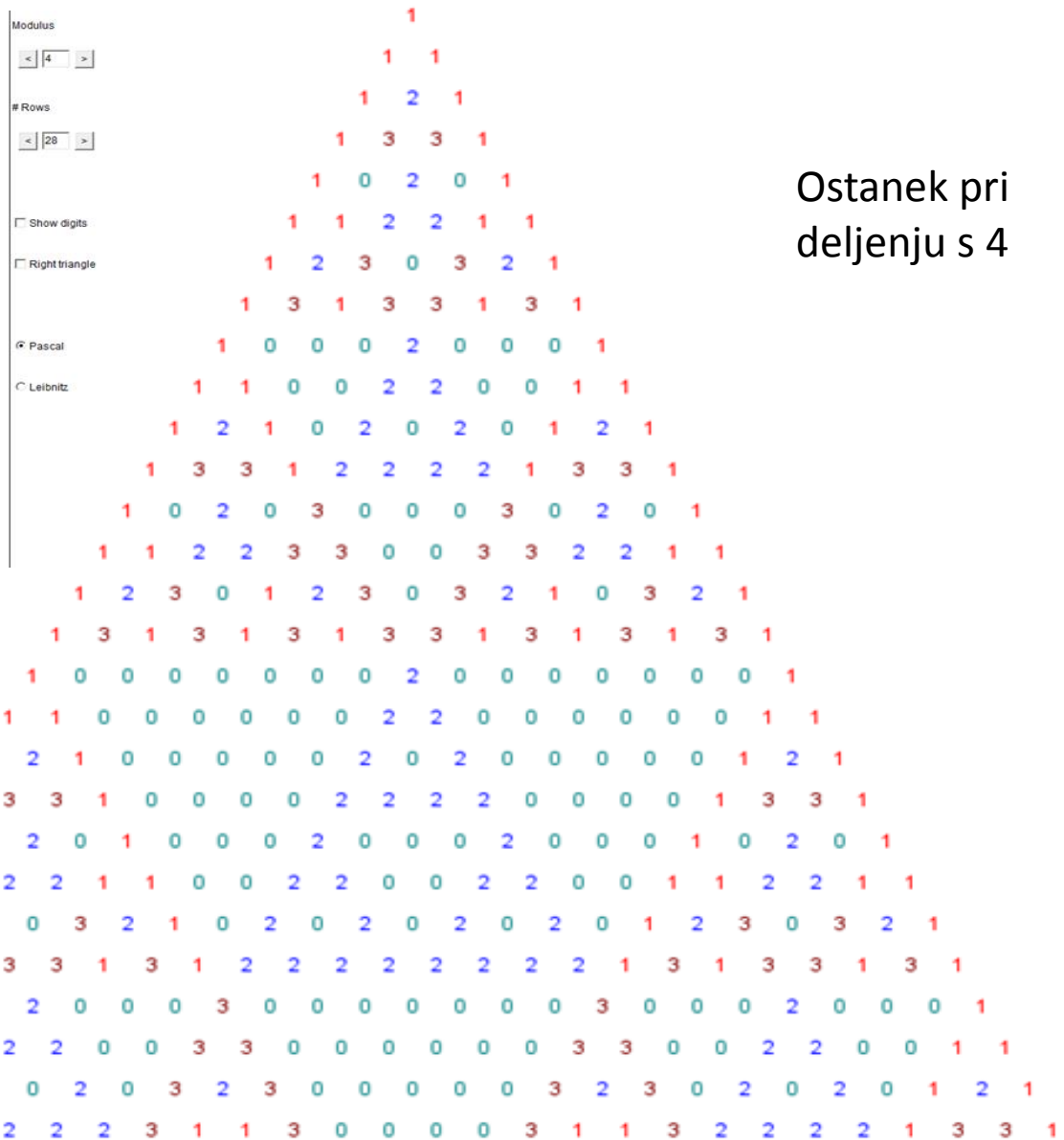
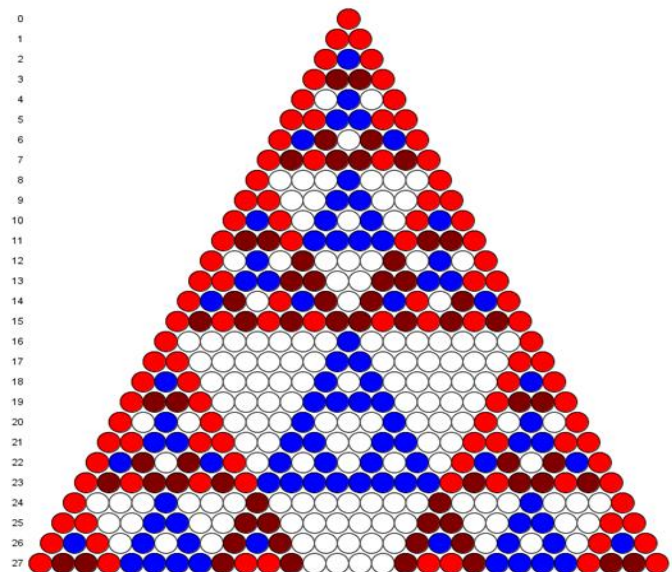
Right triangle

Pascal

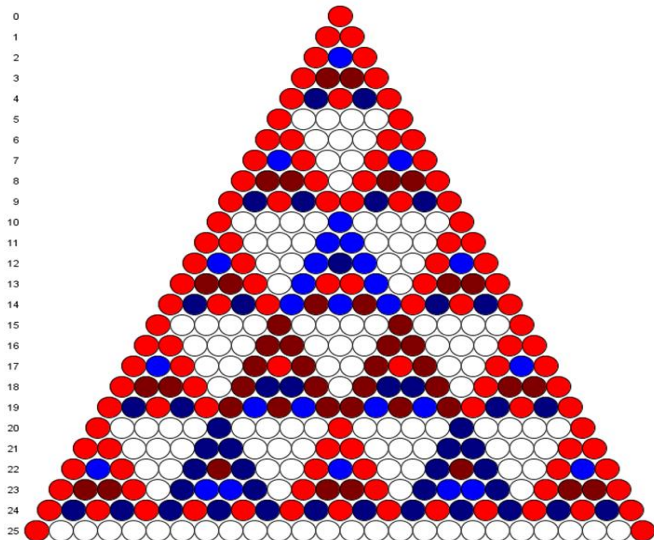
Leibnitz



# Pascalov trikotnik

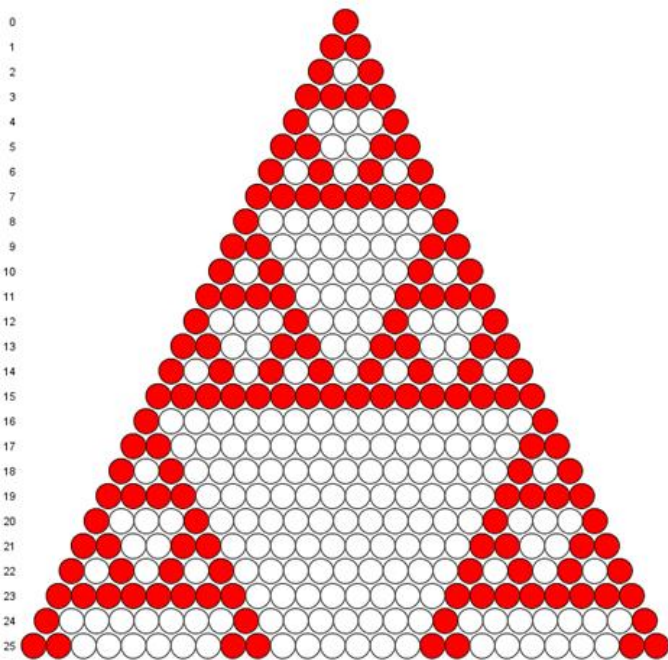


# Pascalov trikotnik



Ostanek pri deljenju s 5

# Pascalov trikotnik - praštevila



MODULUS  
[ < ] 2 [ > ]

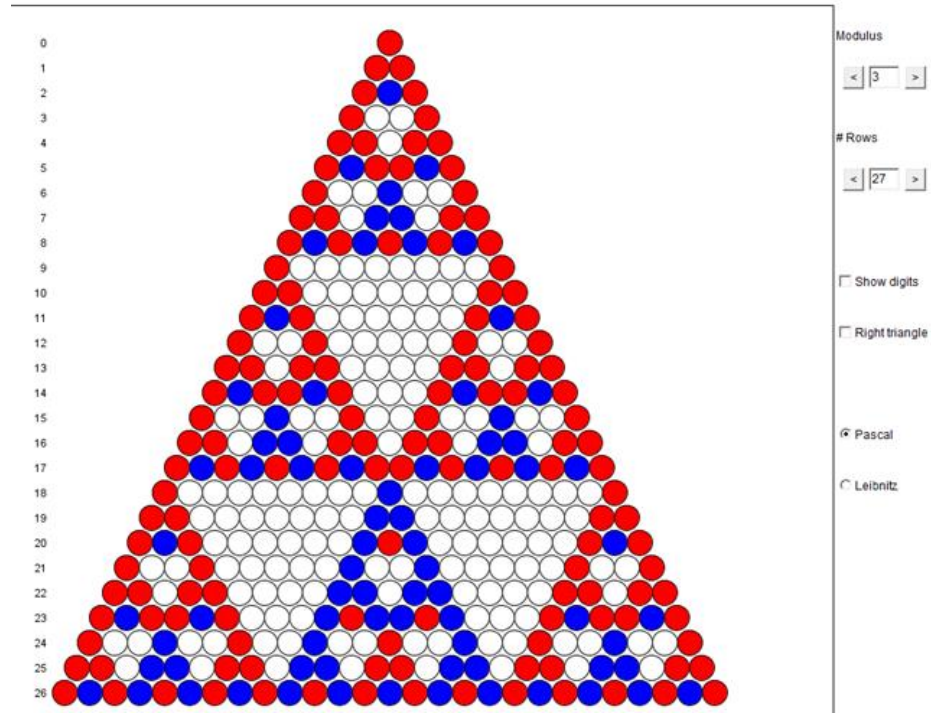
# Rows  
[ < ] 26 [ > ]

Show digits

Right triangle

Pascal

Leibnitz



Modulus  
[ < ] 3 [ > ]

# Rows  
[ < ] 27 [ > ]

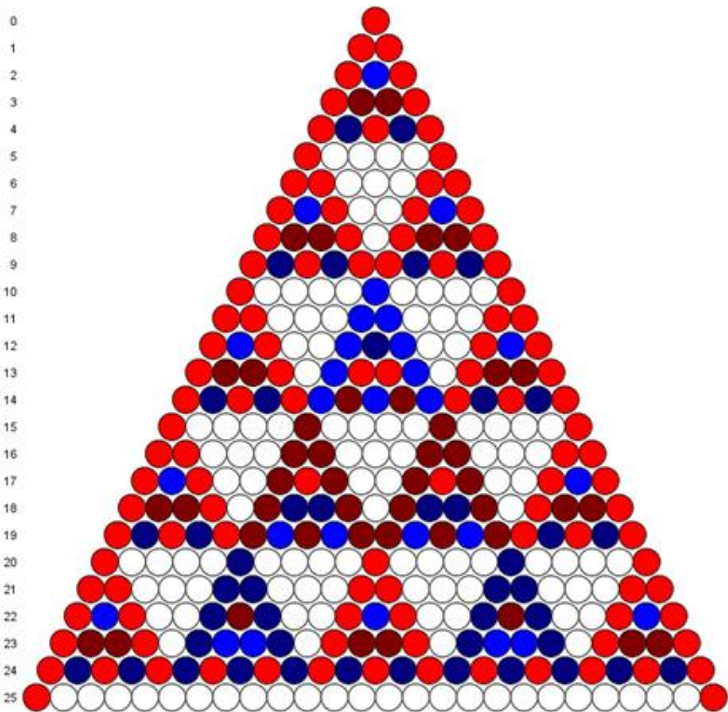
Show digits

Right triangle

Pascal

Leibnitz

# Pascalov trikotnik - praštevila



Modulus  
< 5 >

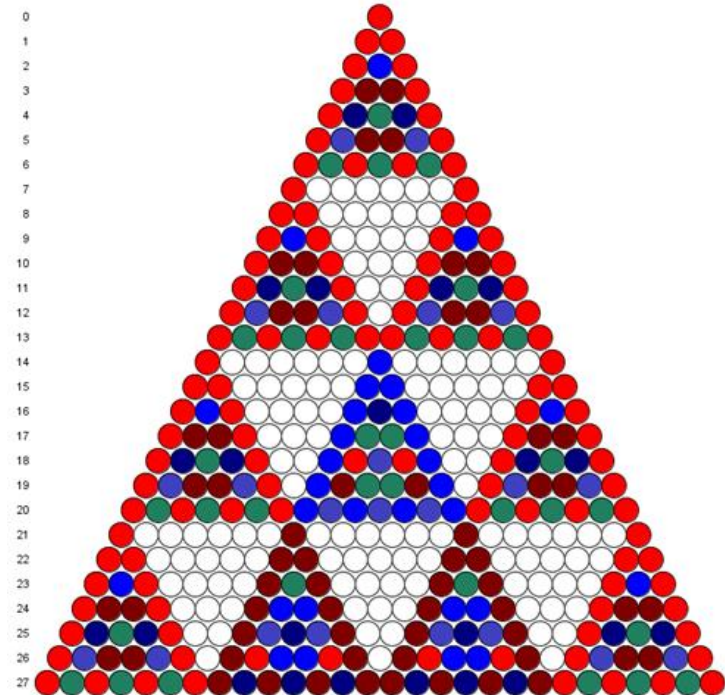
# Rows  
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Show digits

Right triangle

Pascal

Leibnitz



Modulus  
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# Rows  
< 28 >

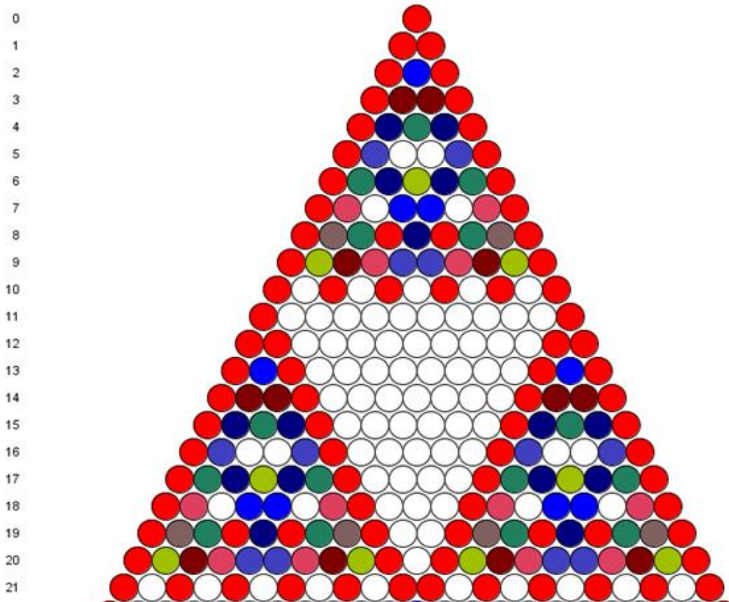
Show digits

Right triangle

Pascal

Leibnitz

# Pascalov trikotnik - praštevila



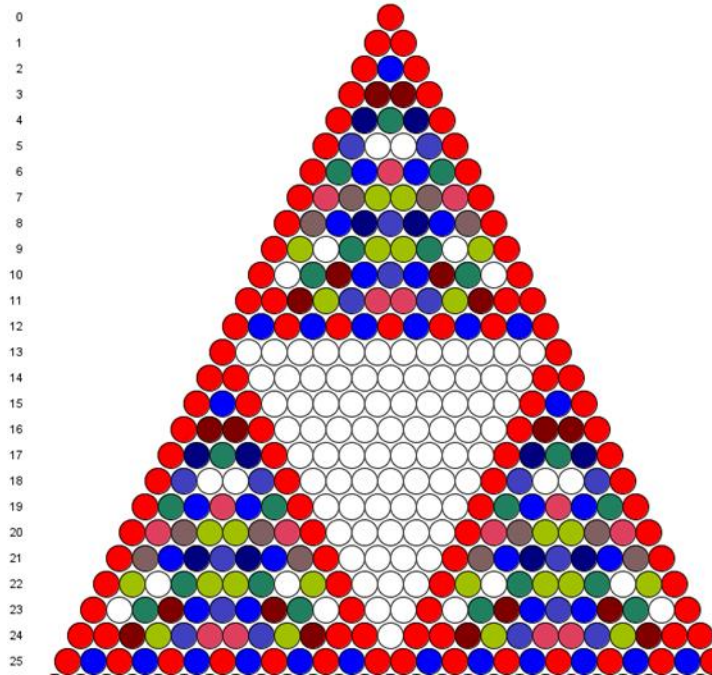
Modulus  
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# Rows  
< 28 >

Show digits

Right triangle

Pascal



Modulus  
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# Rows  
< 28 >

Show digits

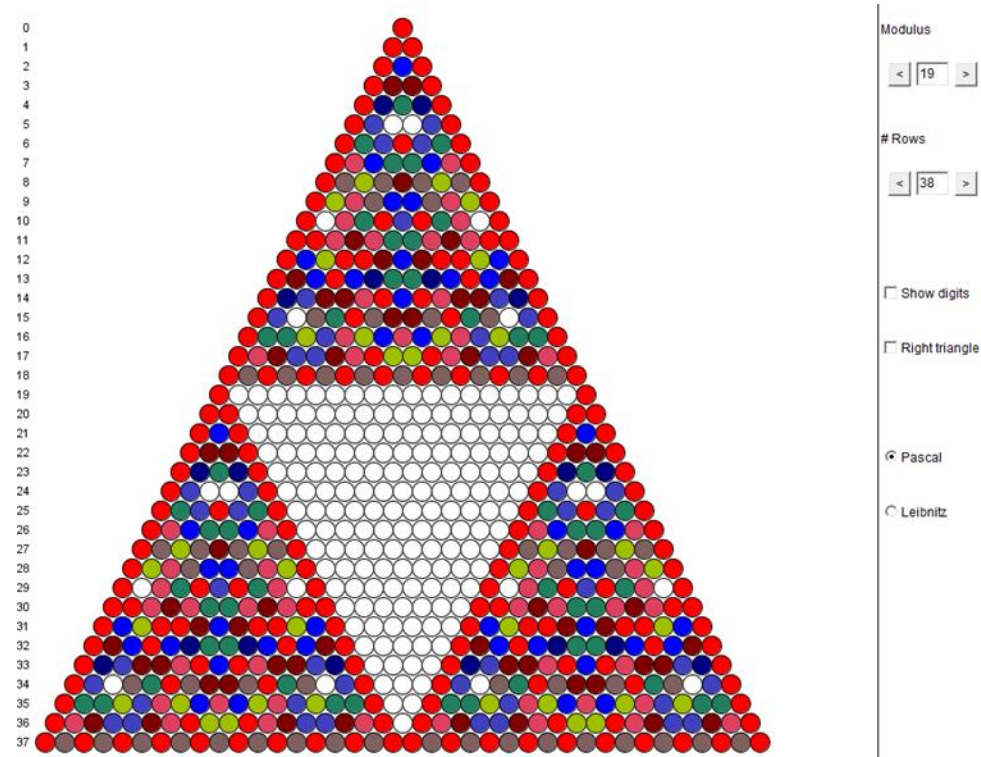
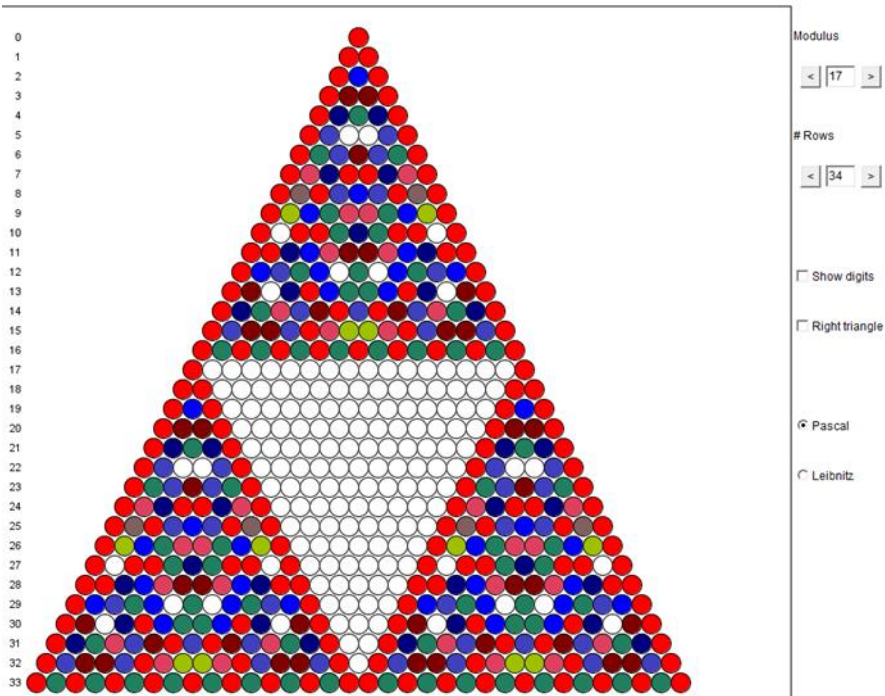
Right triangle

Pascal

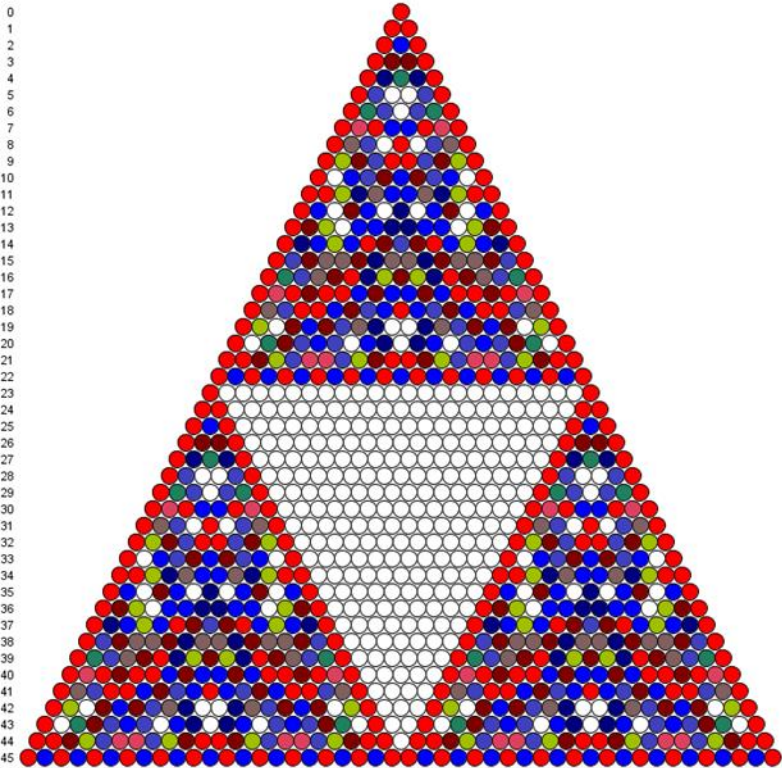
Leibnitz



# Pascalov trikotnik - praštevila



# Pascalov trikotnik - praštevila



Modulus  
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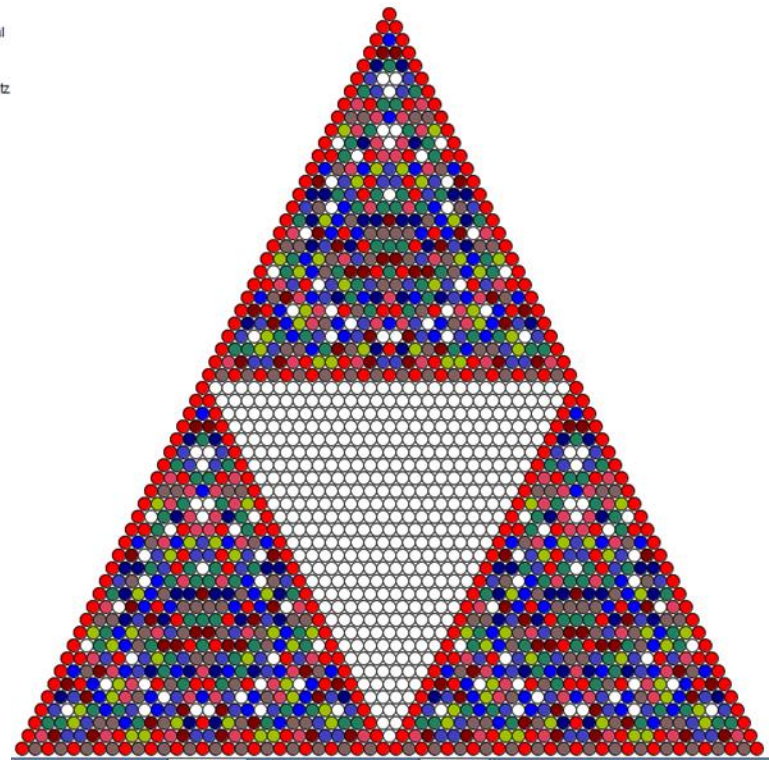
# Rows  
< 46 >

Show digits

Right triangle

Pascal

Leibnitz



Modulus  
< 29 >

# Rows  
< 58 >

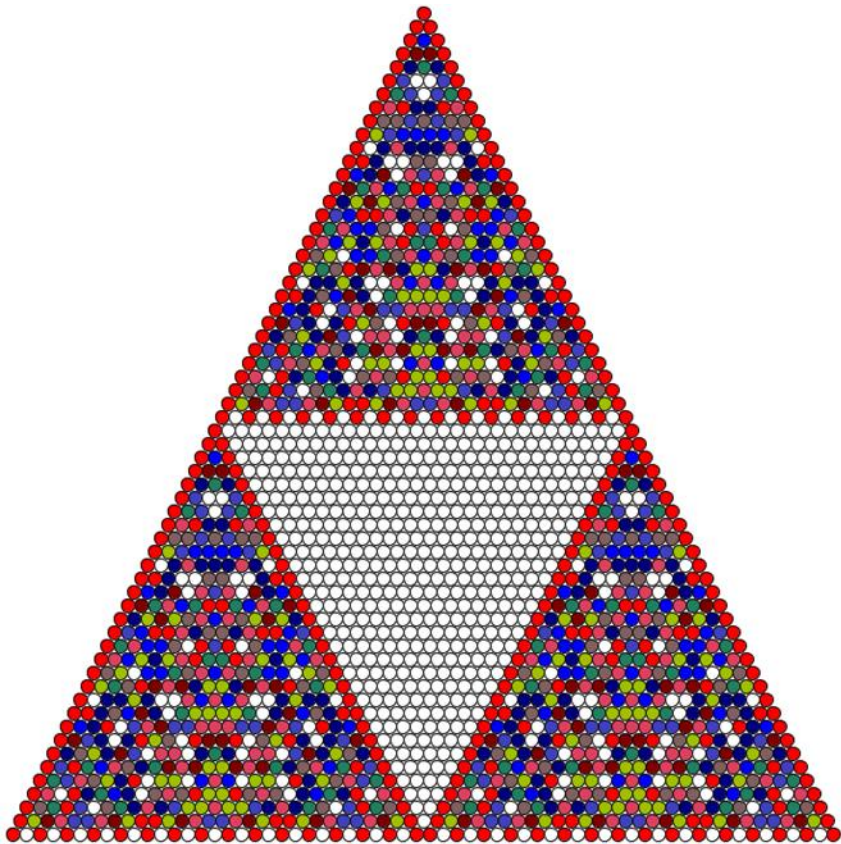
Show digits

Right triangle

Pascal

Leibnitz

# Pascalov trikotnik - praštevila



Modulus  
< 31 >

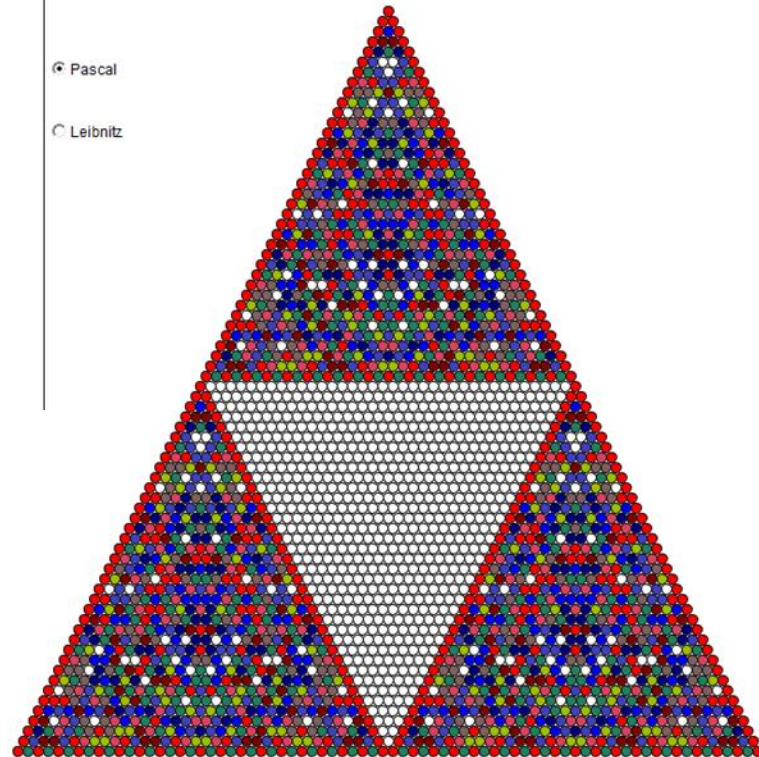
# Rows  
< 62 >

Show digits

Right triangle

Pascal

Leibnitz



Modulus  
< 37 >

# Rows  
< 74 >

Show digits

Right triangle

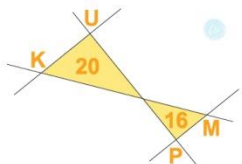
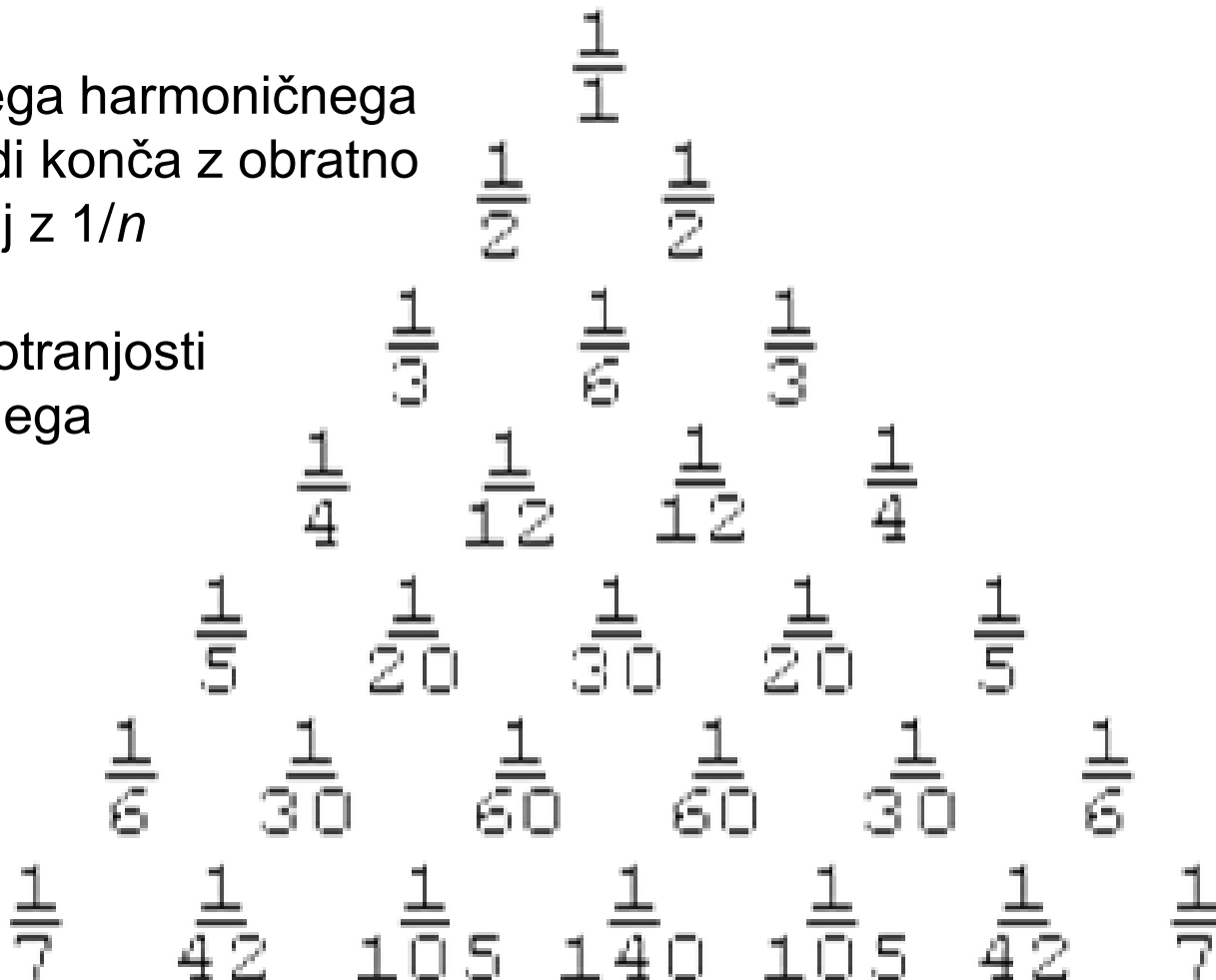
Pascal

Leibnitz

# Leibnizov harmonični trikotnik

- $n$ -ta vrstica Leibnizovega harmoničnega trikotnika se prične in tudi konča z obratno vrednostjo števila  $n$ , torej z  $1/n$

- posamezno število v notranjosti Leibnizovega harmoničnega trikotnika je dobljeno kot vsota obeh števil pod njim



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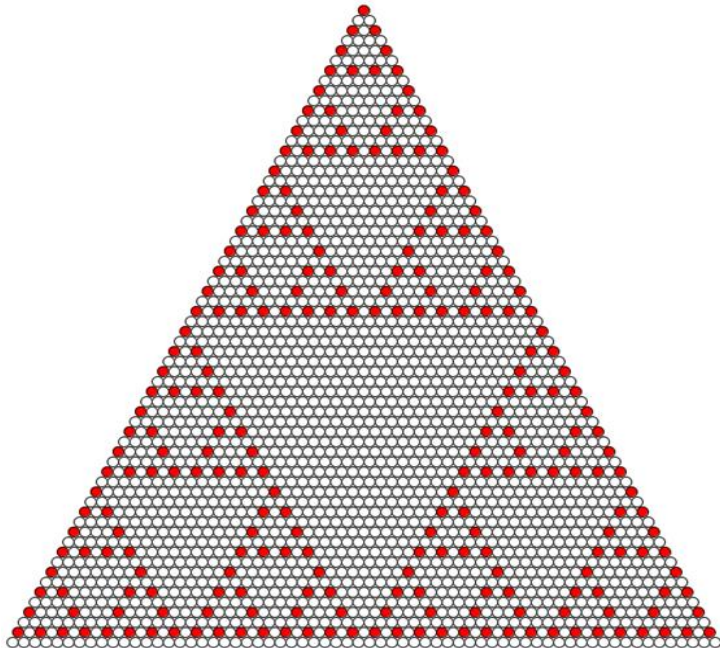


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# Trikotnik iz imenovalcev števil Leibnitzovega trikotnika



Modulus  
< 2 >

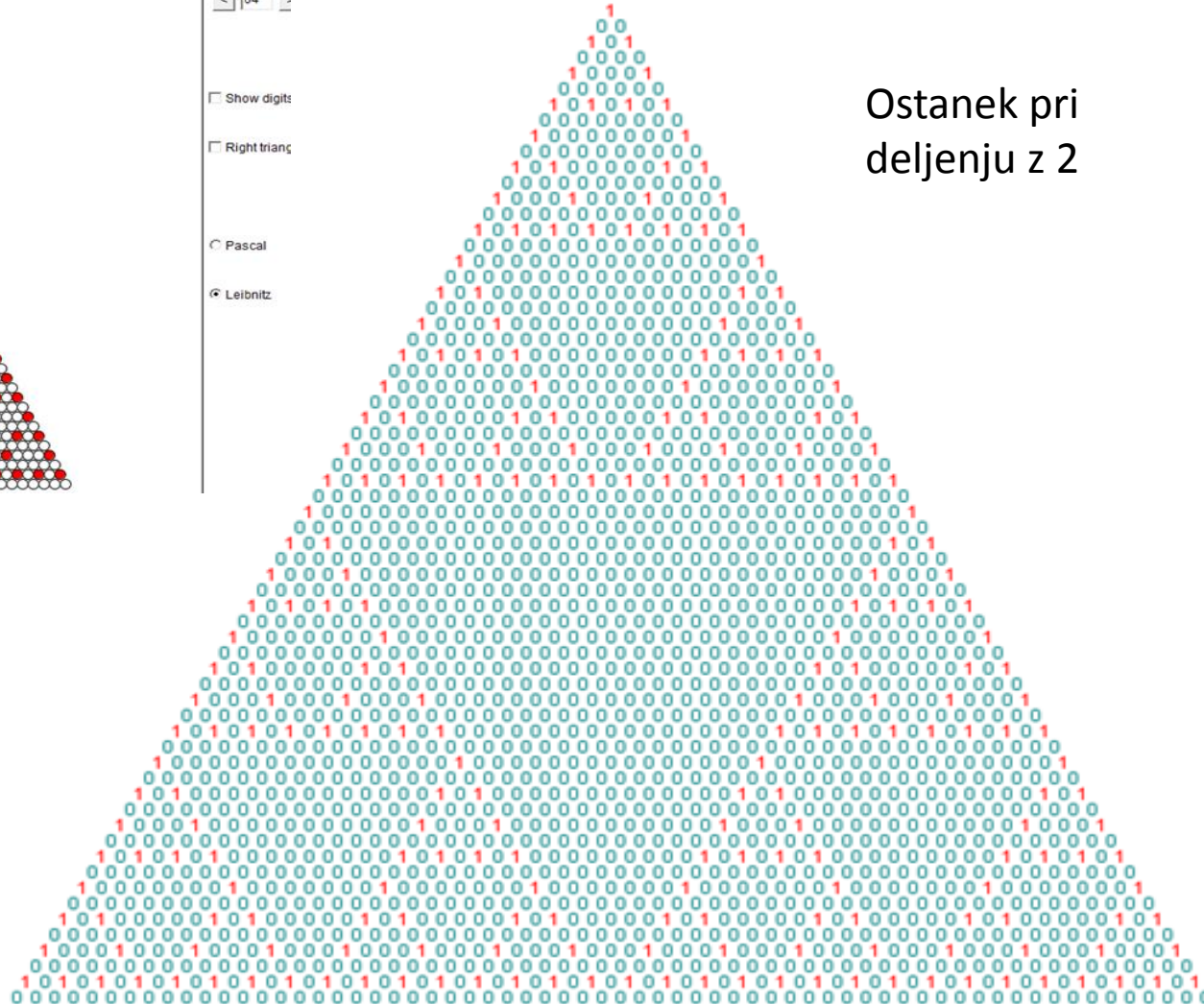
# Rows  
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Show digits

Right triang

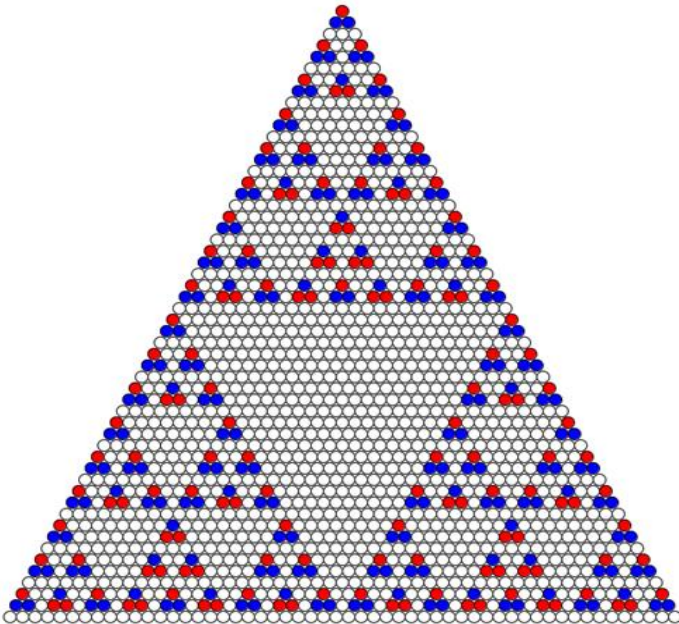
Pascal

Leibnitz



Ostane pri deljenju z 2

# Trikotnik iz imenovalcev števil Leibnitzovega trikotnika



Modulus

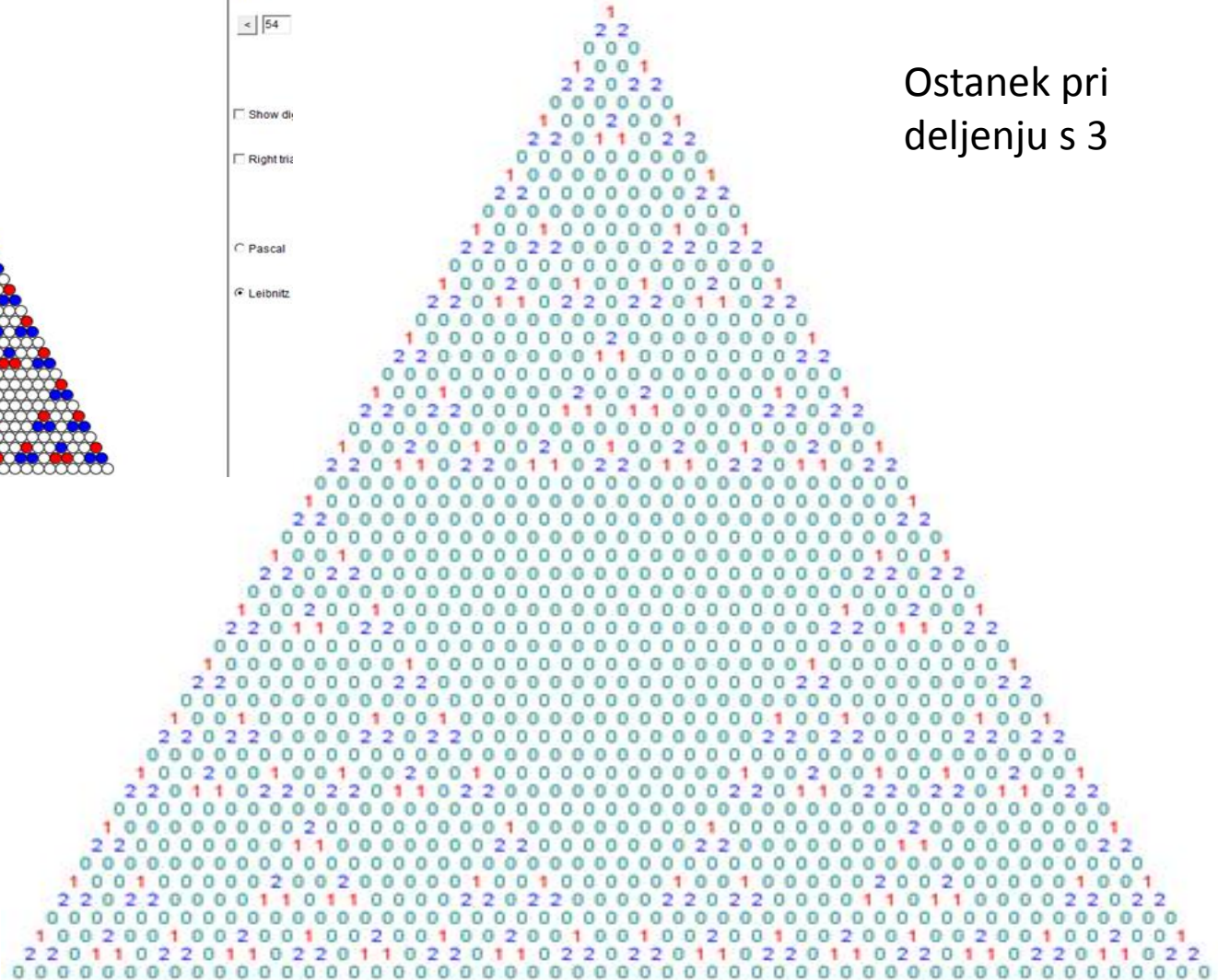
# Rows

Show di

Right tri

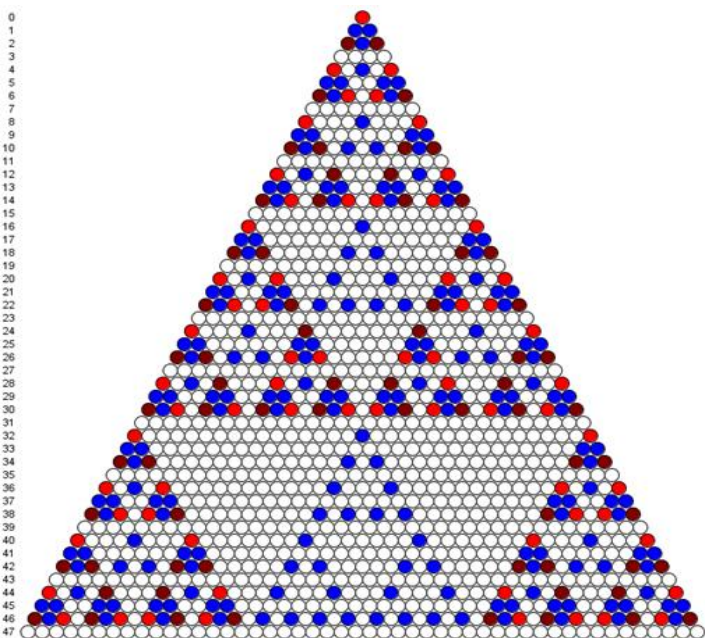
Pascal

Leibniz



Ostanek pri deljenju s 3

# Trikotnik iz imenovalcev števil Leibnitzovega trikotnika



Ostanek pri deljenju s 4



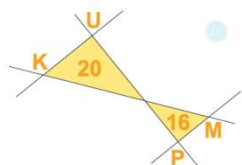


Viri:

<https://www.youtube.com/watch?v=YUqHdxxdbyM>

<http://www.shodor.org/interactivate/activities/ColoringMultiples/>

<http://www.cut-the-knot.org/Curriculum/Combinatorics/LeibnitzTriangle.shtml>



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