



# Utvecklad undervisning i matematik

Vallonskolan 8 december 2022

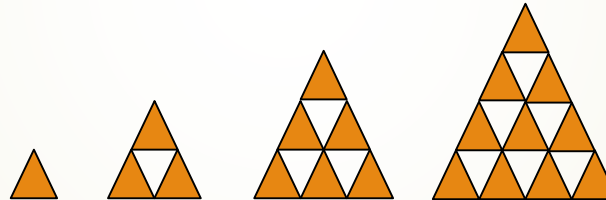
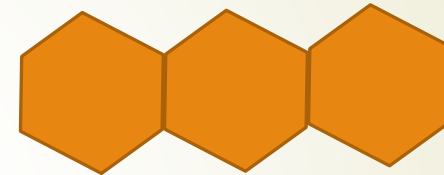
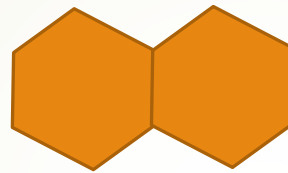
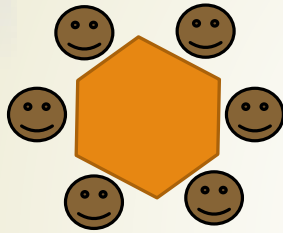


# Innehåll

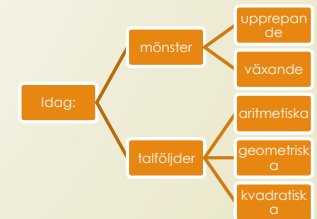
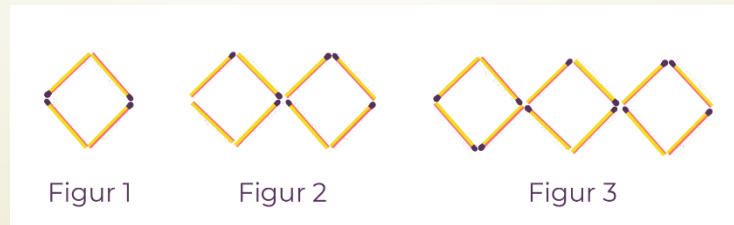
- Det ni läst & prövat
- Mönster och talföljder
- Mera mönster
- Workshop

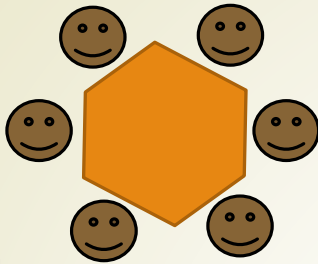


# Erfarenheter och reflektioner

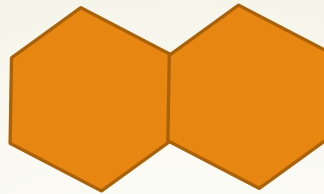


2 4 6 8 ...  
 2 4 8 16 ...  
 2 4 7 11 ...  
 2 4 6 7 10 ...

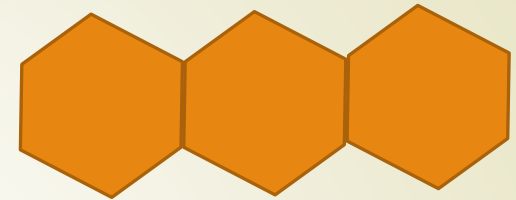




Figur 1



Figur 2



Figur 3

...

Figur n	Antal bord	Antal gubbar g	Differens	Uttryck	Formel
1	1	6			
2	2	10	+ 4	$2 \cdot 4 + 2$	
3	3	14	+ 4	$3 \cdot 4 + 2$	
4	4		+ 4	$4 \cdot 4 + 2$	
<b>n</b>	<b>n</b>			$n \cdot 4 + 2$	$g = n \cdot 4 + 2$ $g = 4n + 2$

# Fibonaccis talföljd - en rekursiv talföljd



$$a_1 = 1$$

$$a_2 = 1$$

$$a_3 = a_2 + a_1 = 1 + 1 = 2$$

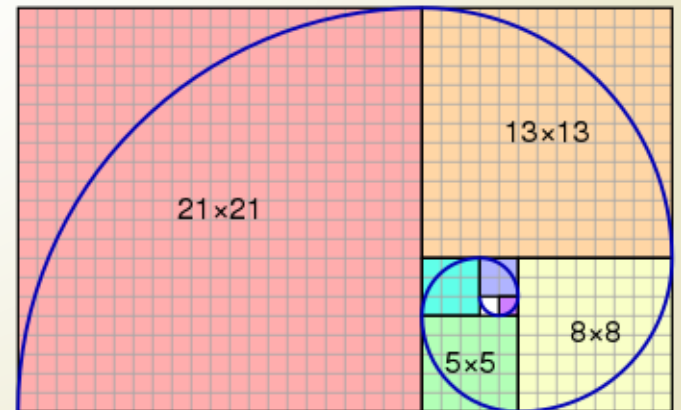
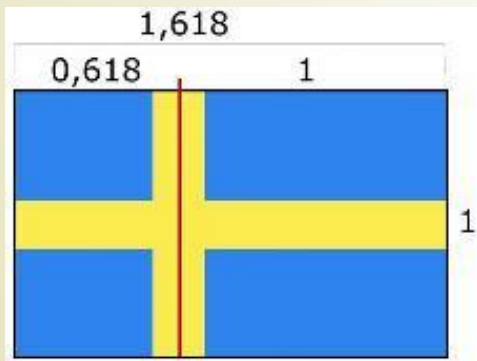
$$a_4 = a_3 + a_2 = 2 + 1 = 3$$

0 1 1 2 3 5 8 13 21 34 55 89 144 233

# Fibonacci & gyllene snittet

0 1 1 2 3 5 8 13 21 34 55 89 144 233

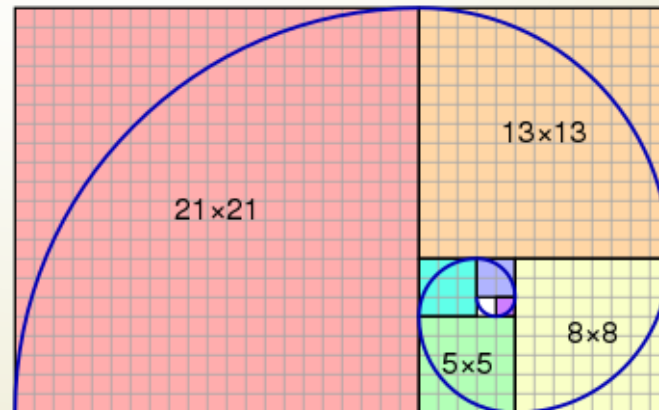
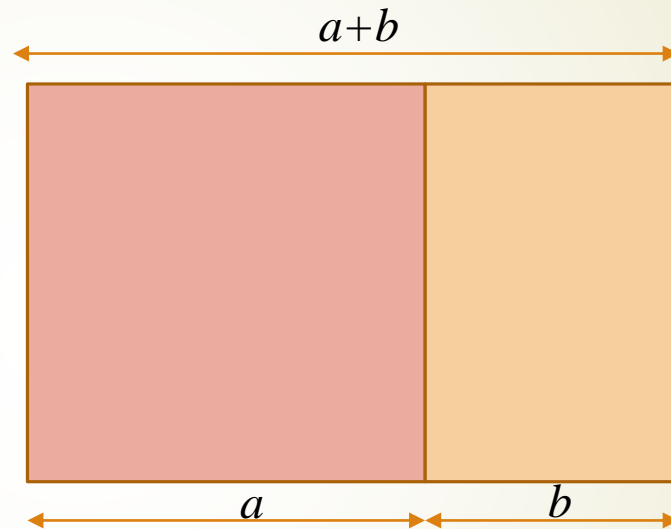
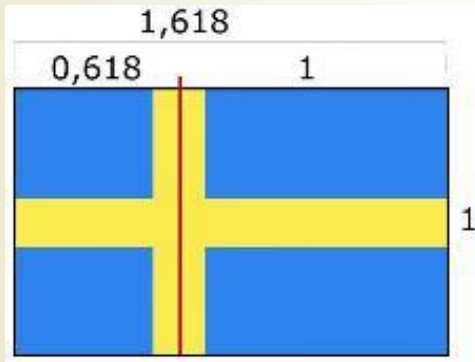
$$\frac{233}{144} = 1,6180$$



# Fibonacci & gyllene snittet

0 1 1 2 3 5 8 13 21 34 55 89 144 233

$$\frac{a+b}{a} = \frac{a}{b} = \varphi$$



Stämmer det?

Sök mått på svenska flaggor ex:  
"Flaggfabriken Kronan".

Pröva olika storlekar på flaggan!  
280x450 cm eller 125x200cm

# Tesselering

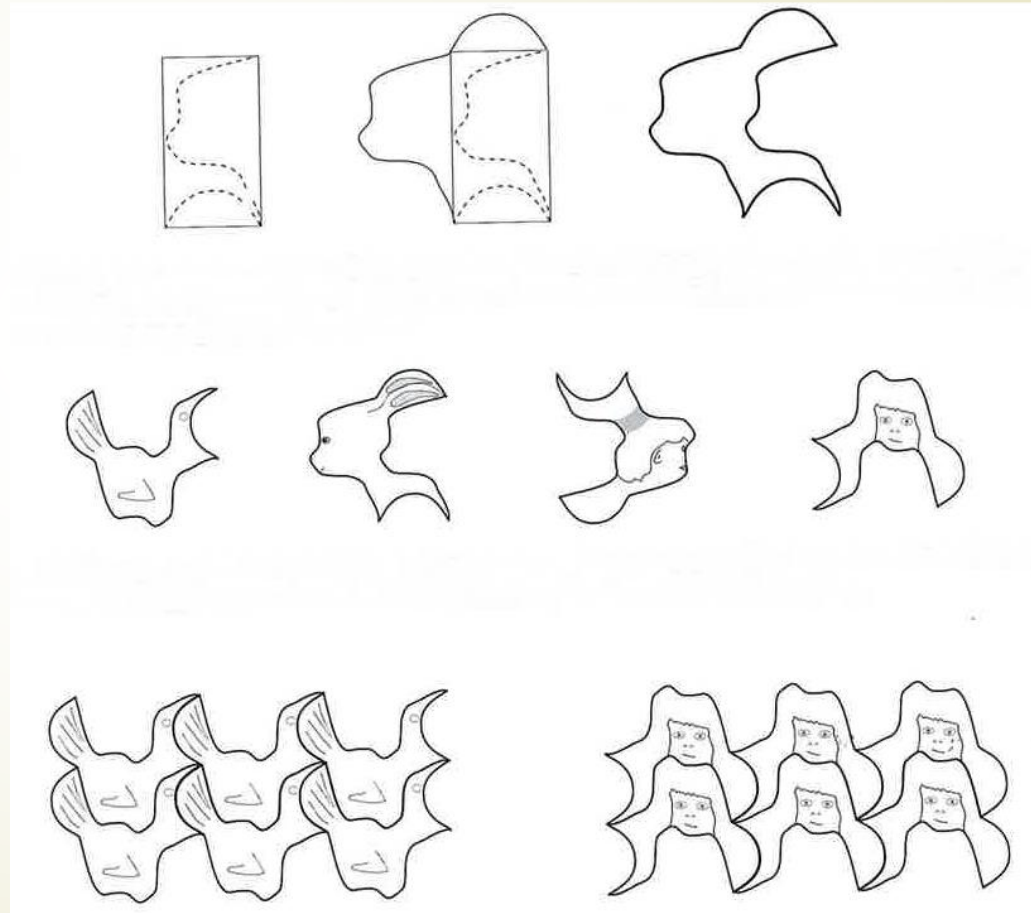
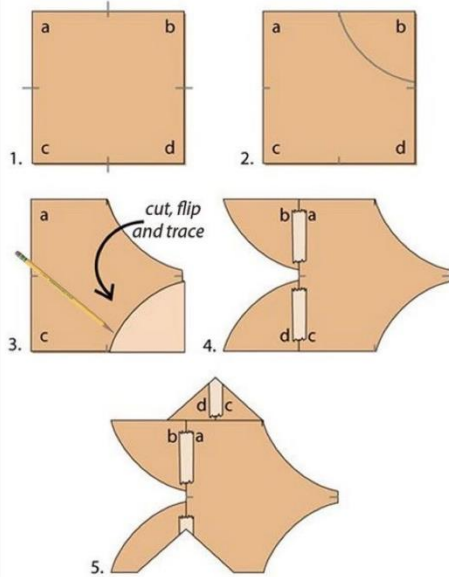
Ett heltäckande mönster av figurer utan mellanrum eller överlappningar.

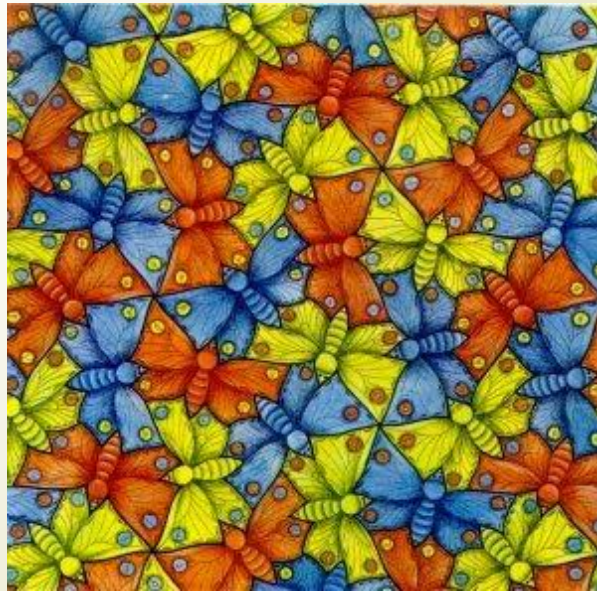
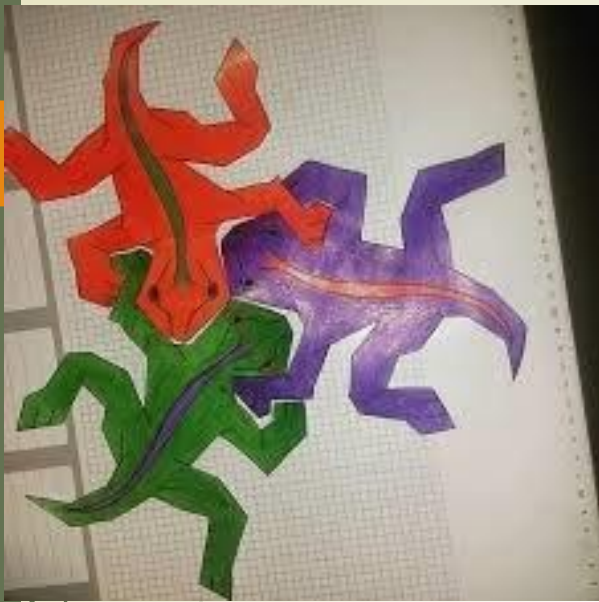
Det latinska ordet tessella – liten mosaikbit.





# Samma form, olika färglagt



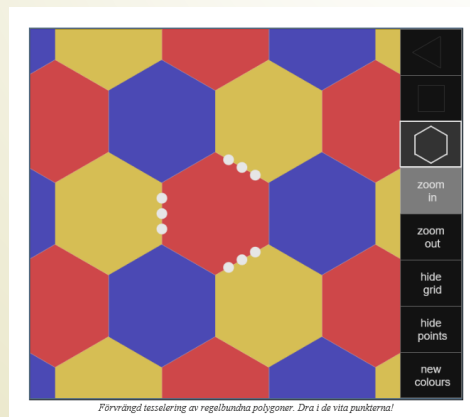


# Digital WS: tesselering

<http://www.malinc.se/math/geometry/tessellationsv.php>

<https://www.nctm.org/Classroom-Resources/Illuminations/Interactives/Tessellation-Creator/>

<https://www.geogebra.org/m/CUdKaHeC>





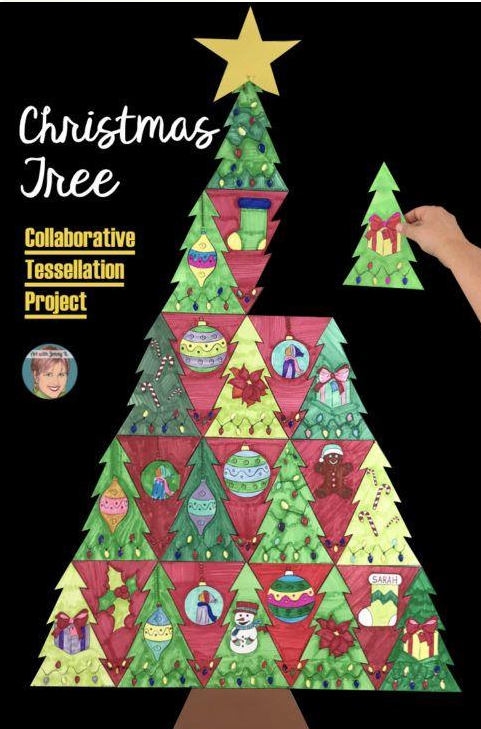
# "Helgtesselering"



**Christmas Tree Tessellation**  
Collaborative Art Project



FrugalFun4Boys.com



*Christmas Tree*

**Collaborative Tessellation Project**





Tack för våra  
år tillsammans  
och  
God Jul!

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