Why do people like abstract art?

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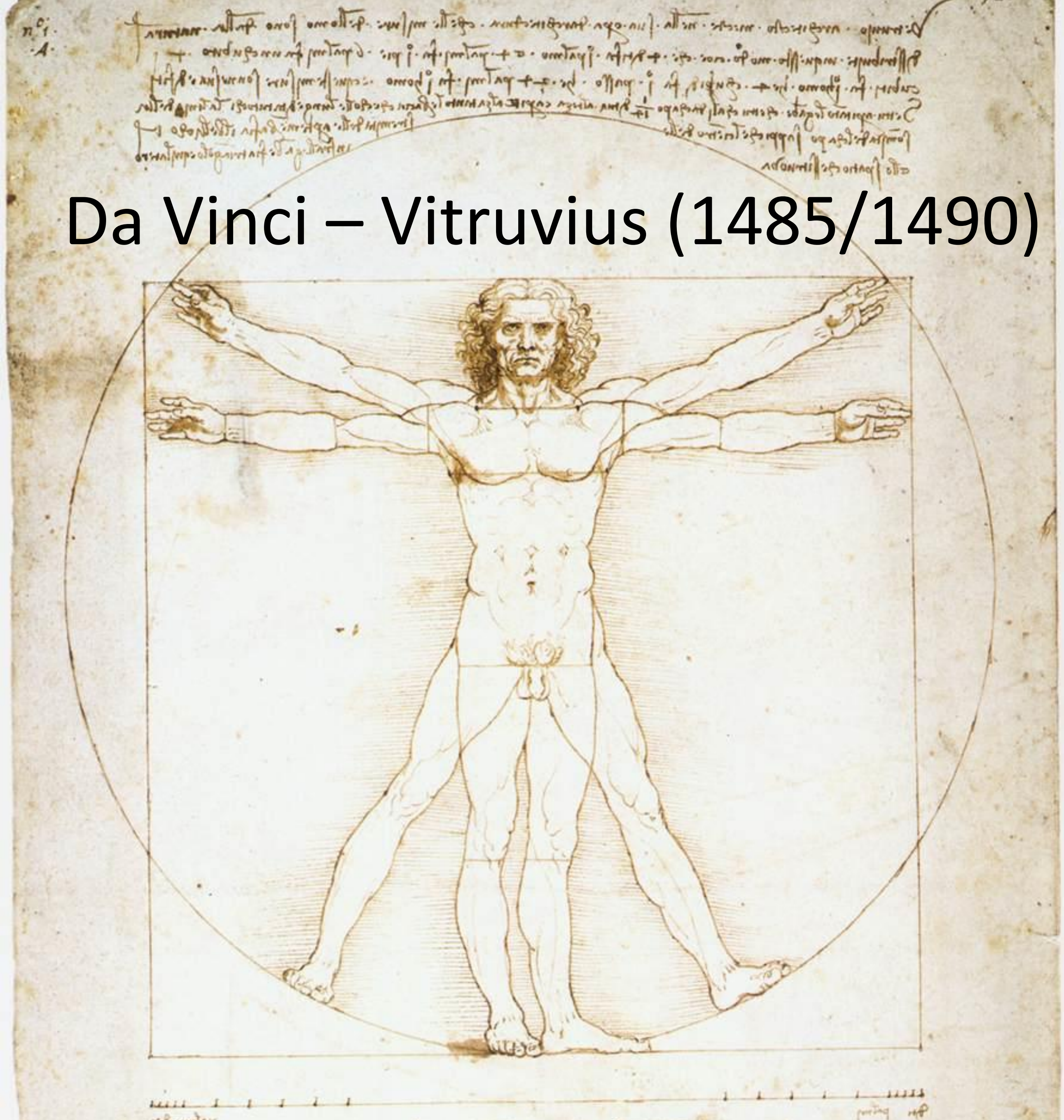
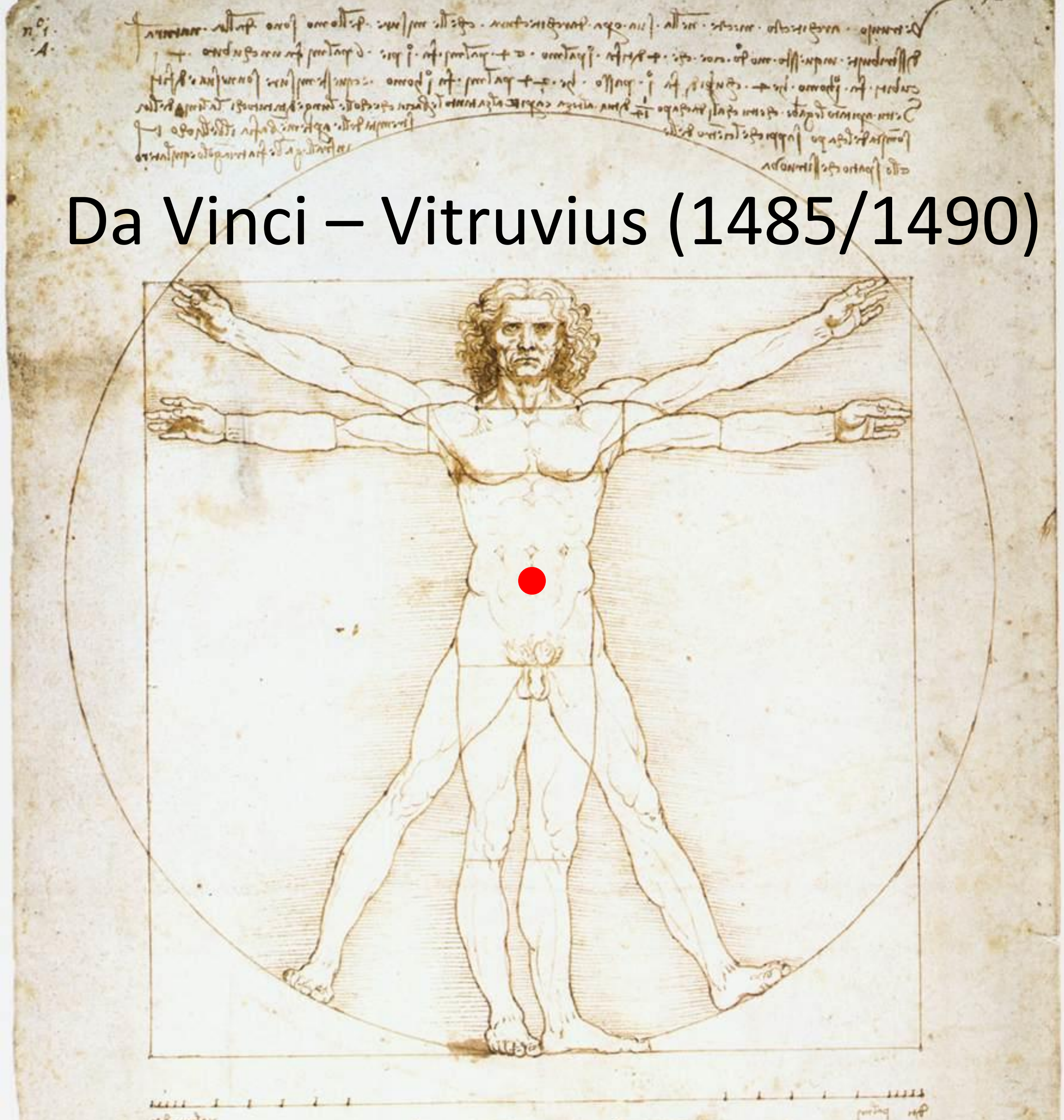
TAOP - I Am A Painter, Maastricht, November 1, 2017

Kazimir Malevich (1915): The Black Square

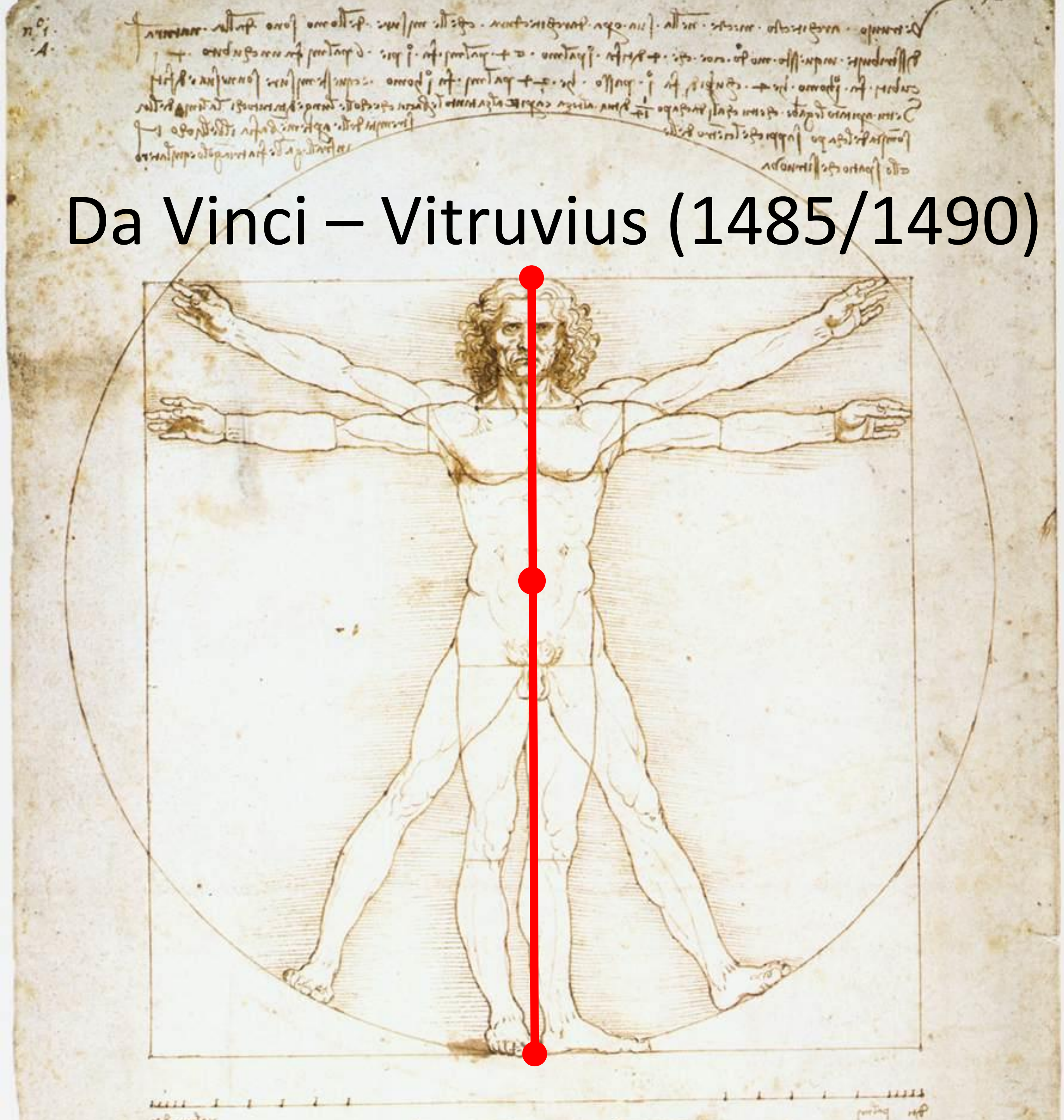
Da Vinci – Vitruvius (1485/1490)



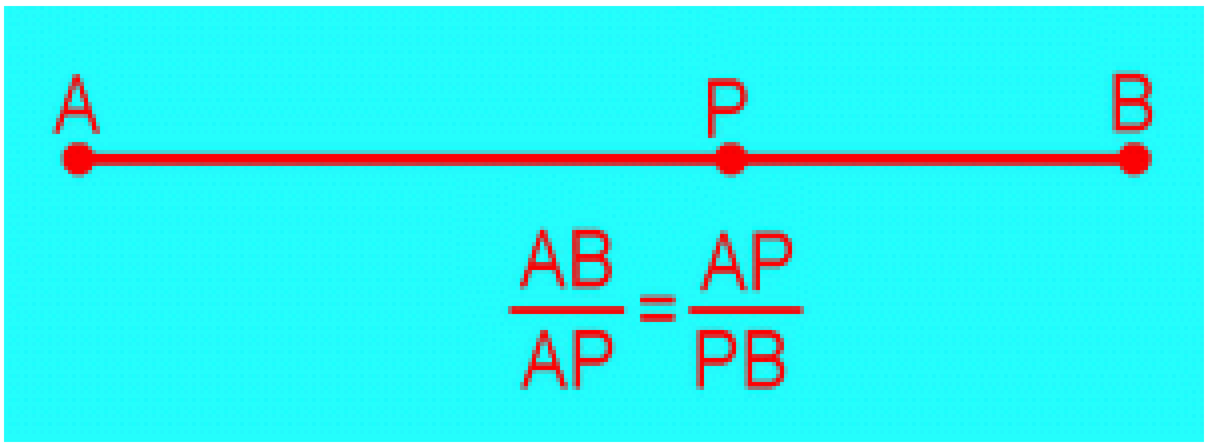
Da Vinci – Vitruvius (1485/1490)



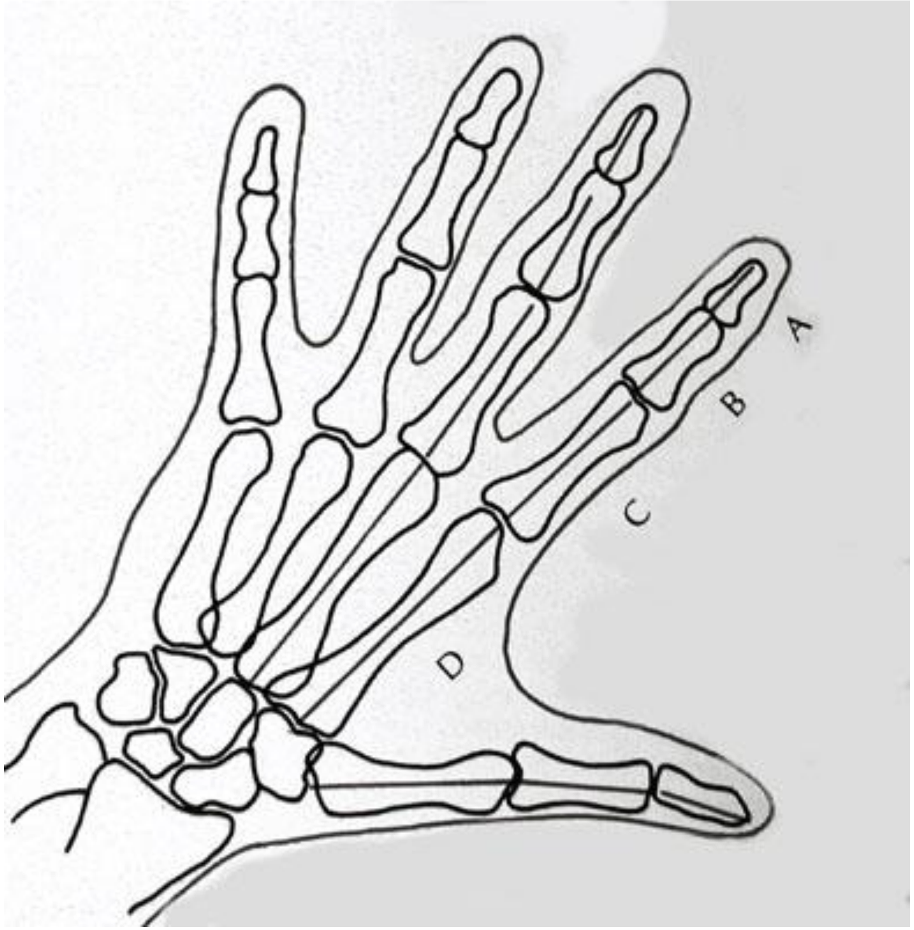
Da Vinci – Vitruvius (1485/1490)



Golden Ratio



Golden Ratio



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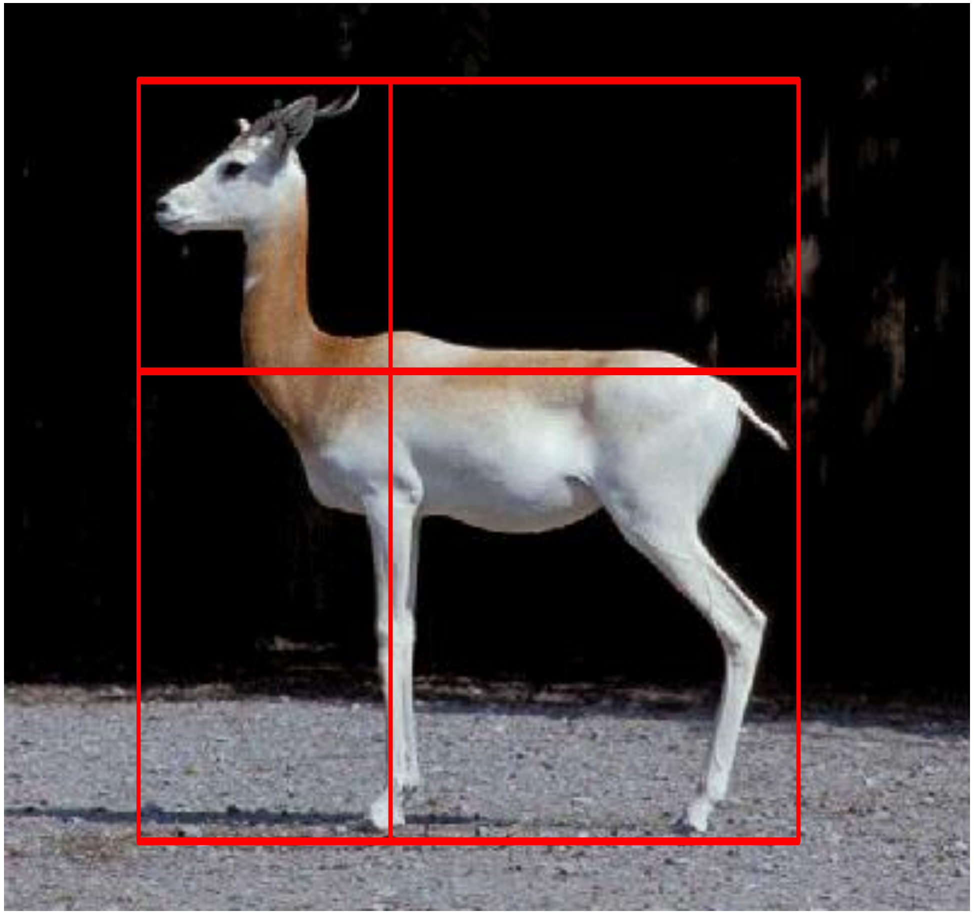
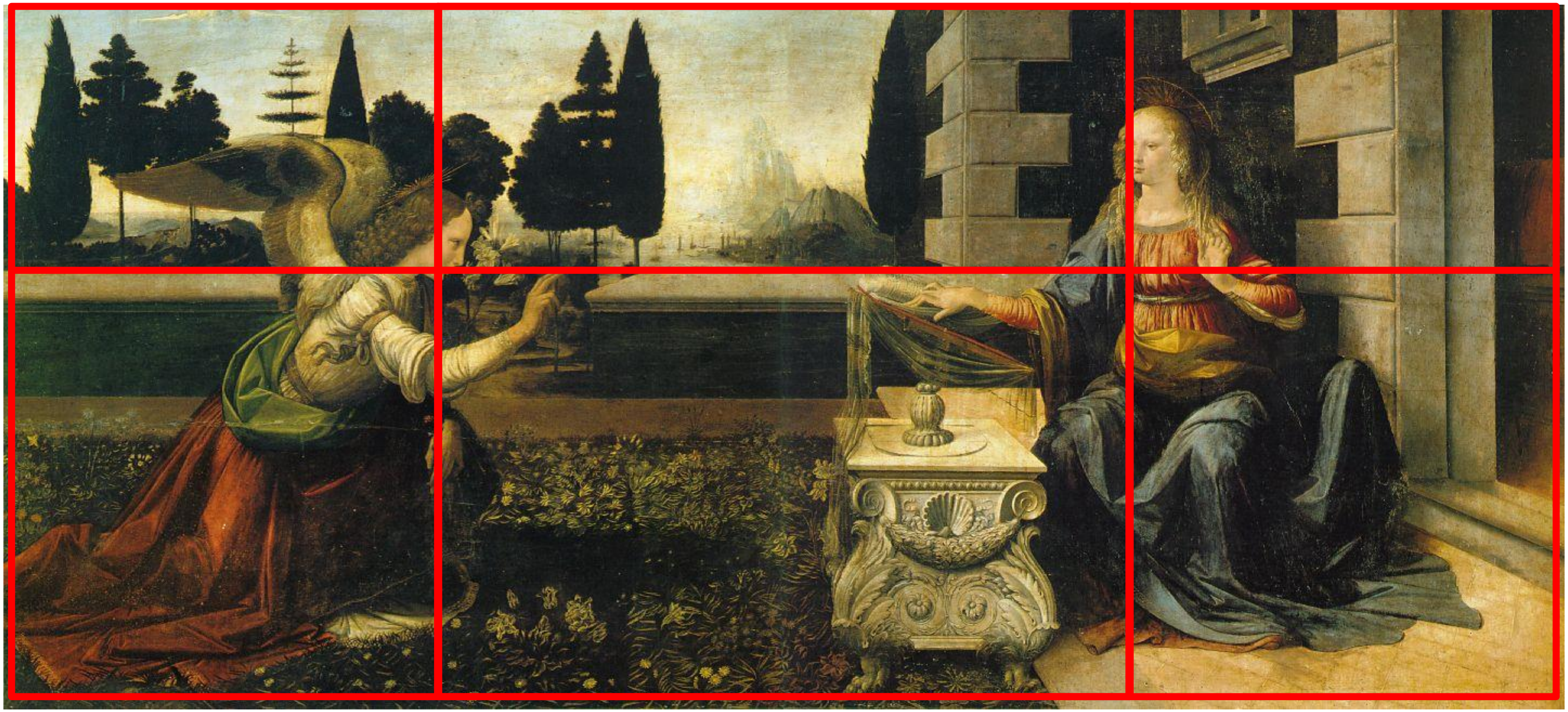
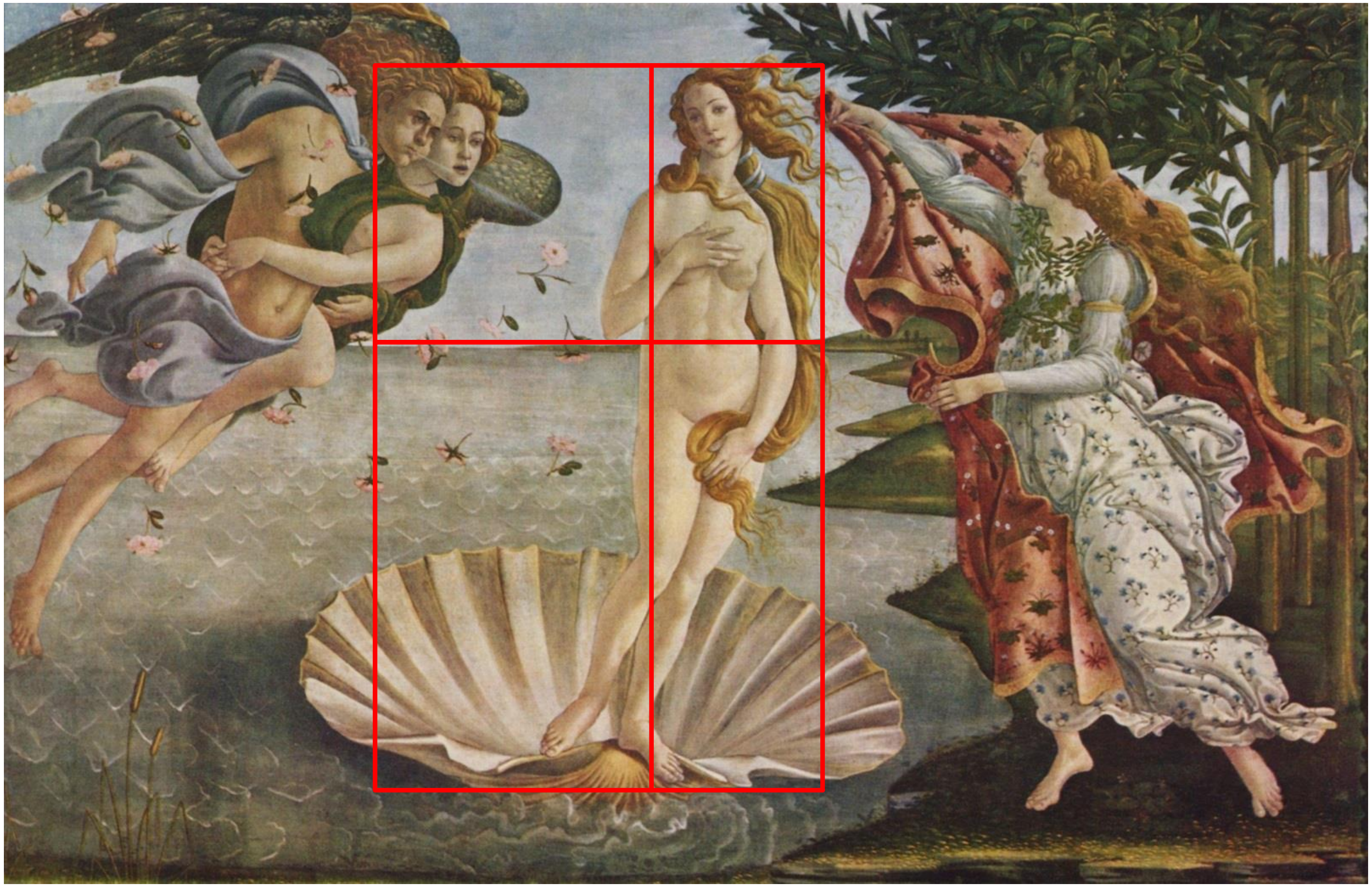
Golden Ratio



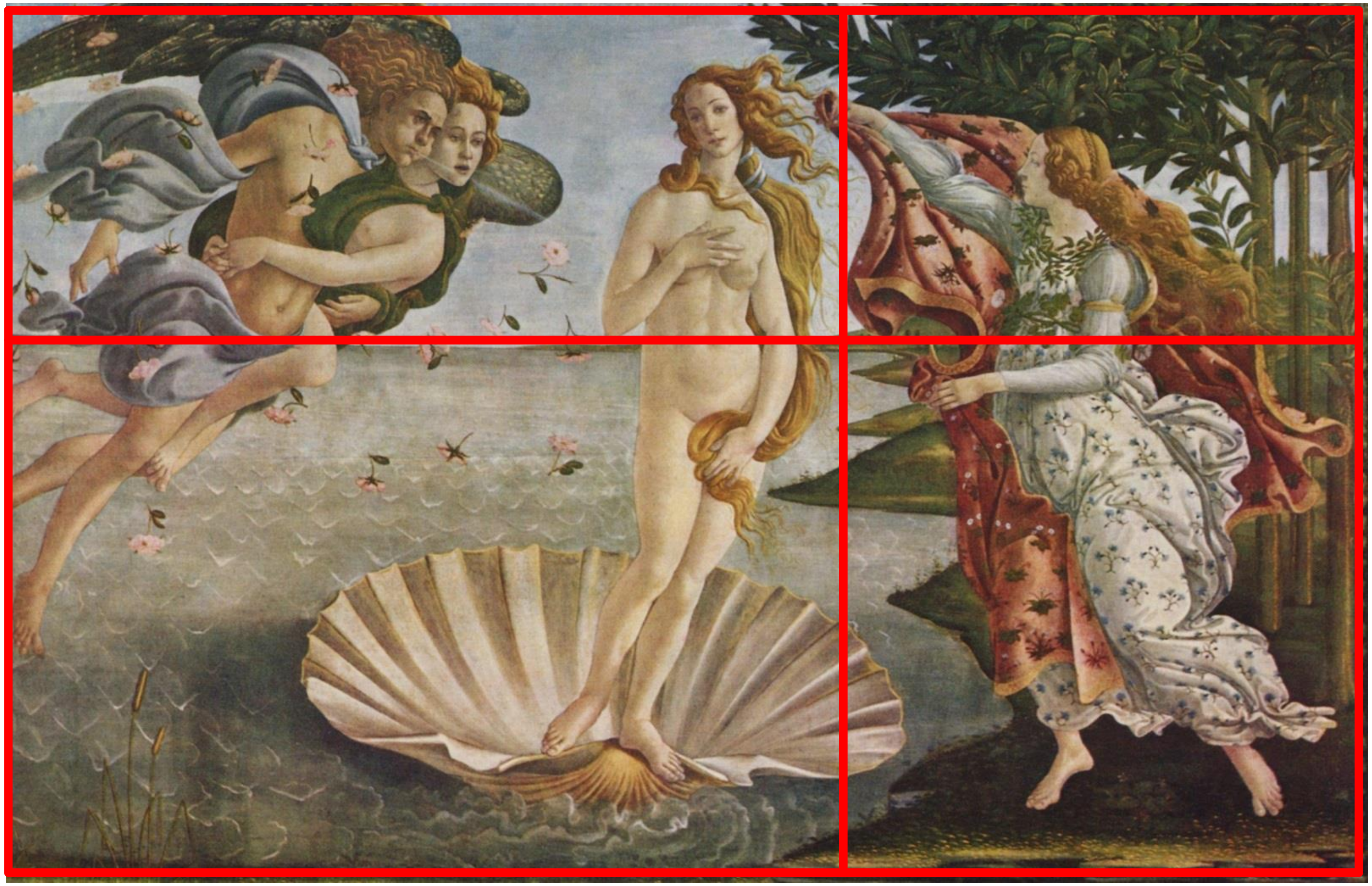
Golden Ratio – Da Vinci (1475)



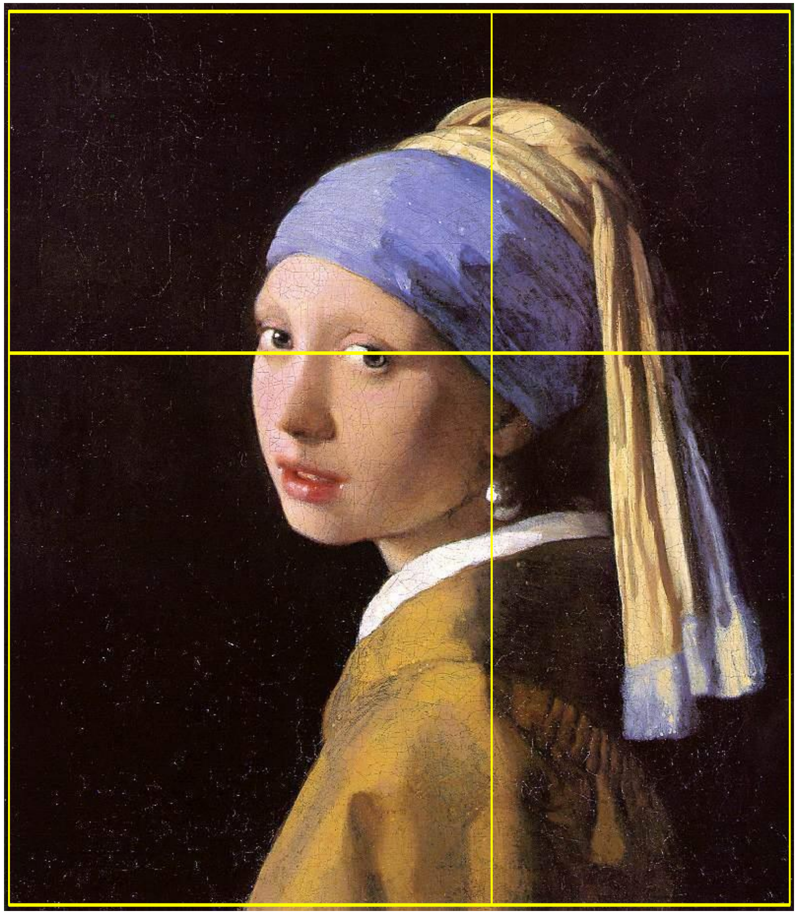
Golden Ratio – Botticelli (1485)



Golden Ration – Botticelli (1485)



Golden Ratio – Vermeer (1665)



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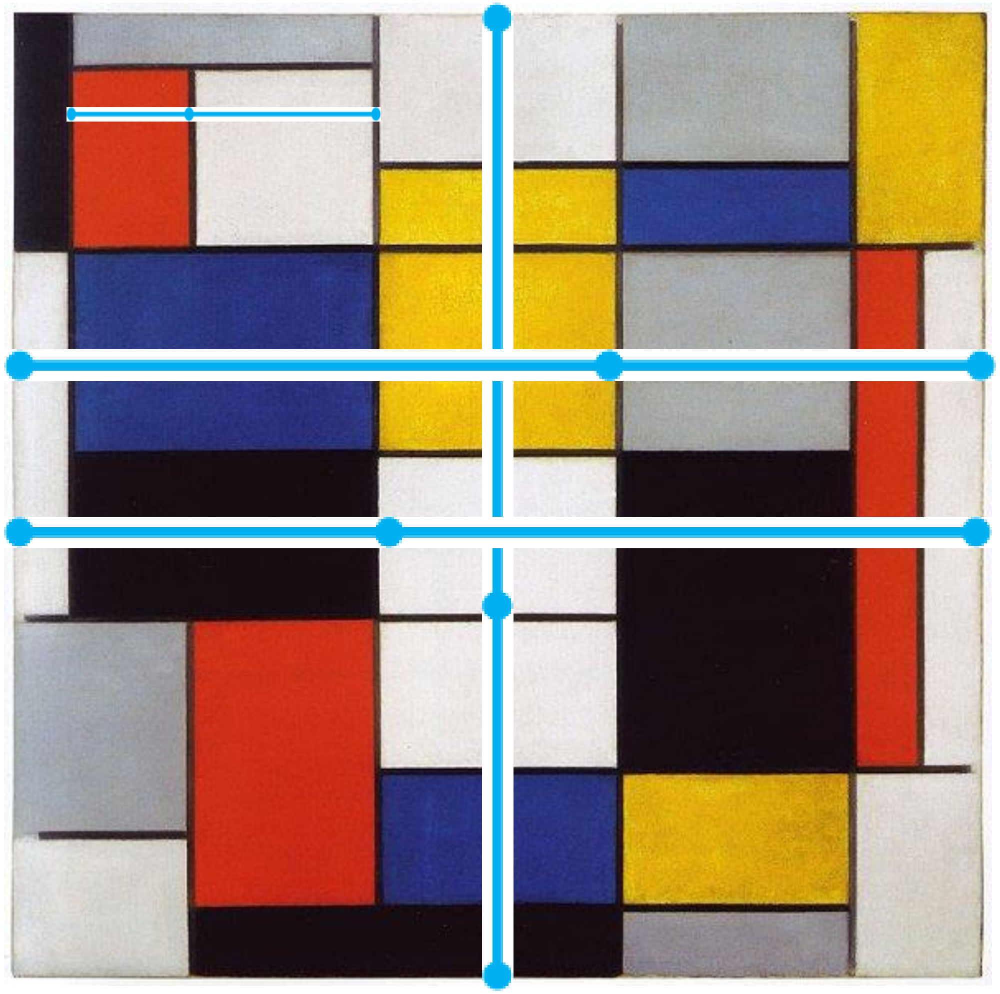
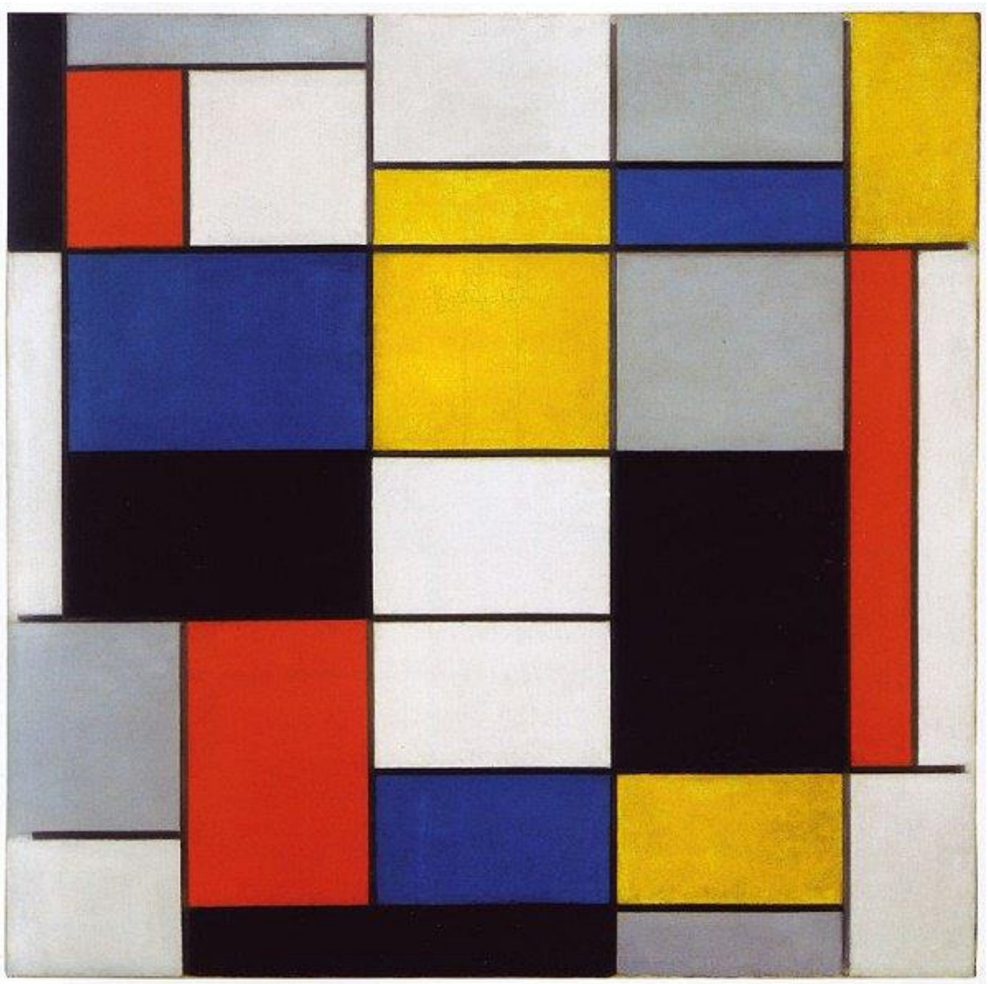
Golden Ratio – Mondriaan (1920)

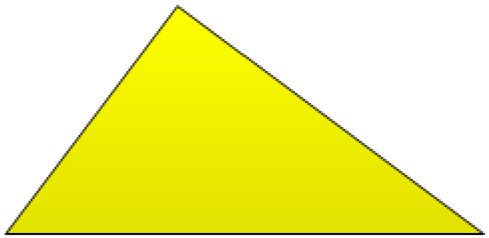


Piet Mondriaan (1920): Composition A



Marie van Vollenhoven: The Sky is the Limit

Beyond the Sky



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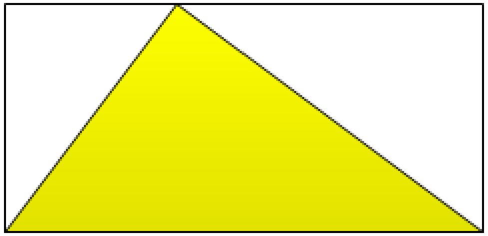

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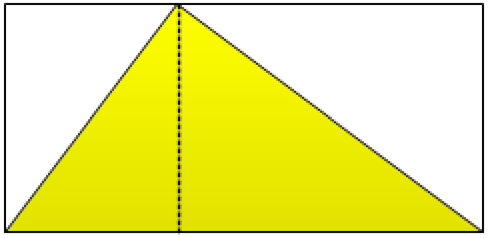

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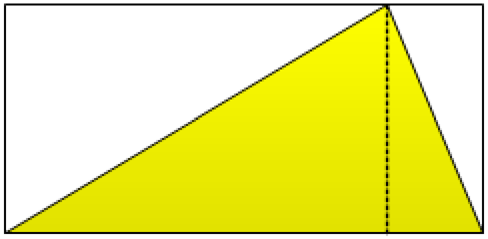

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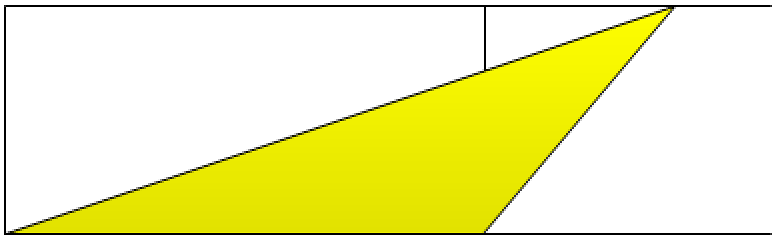

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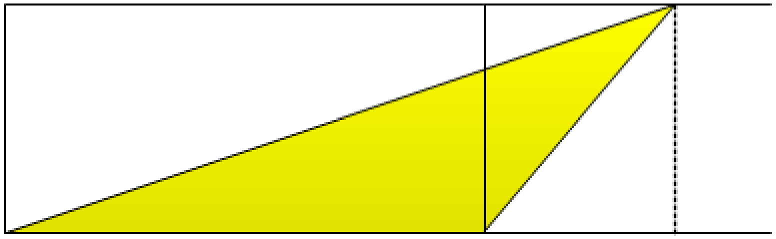

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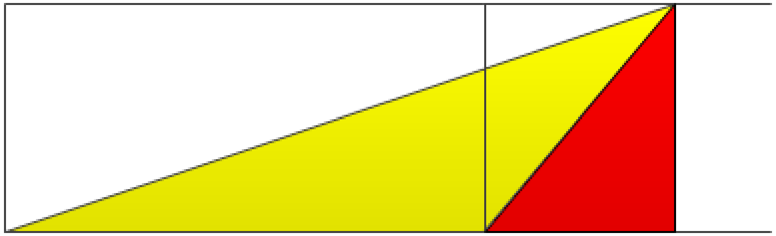

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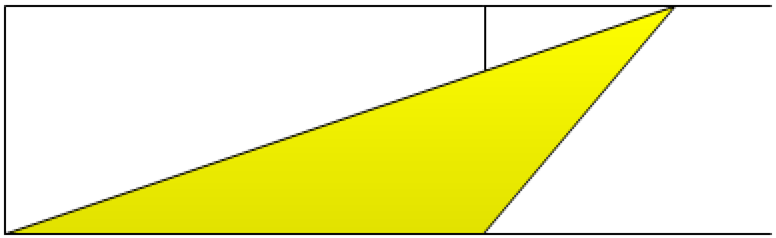

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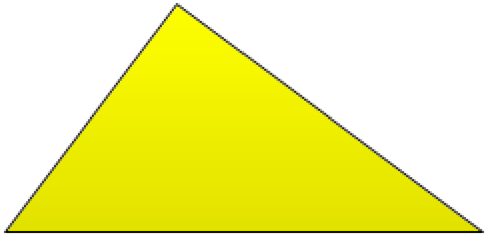

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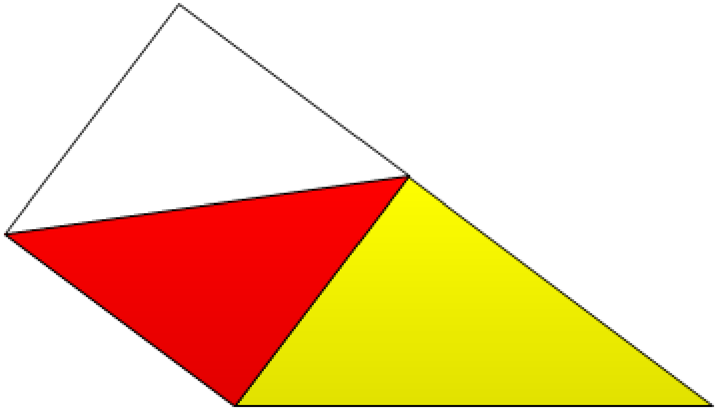

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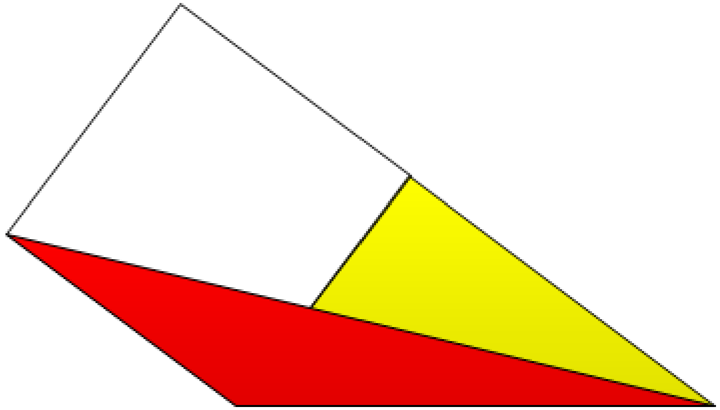

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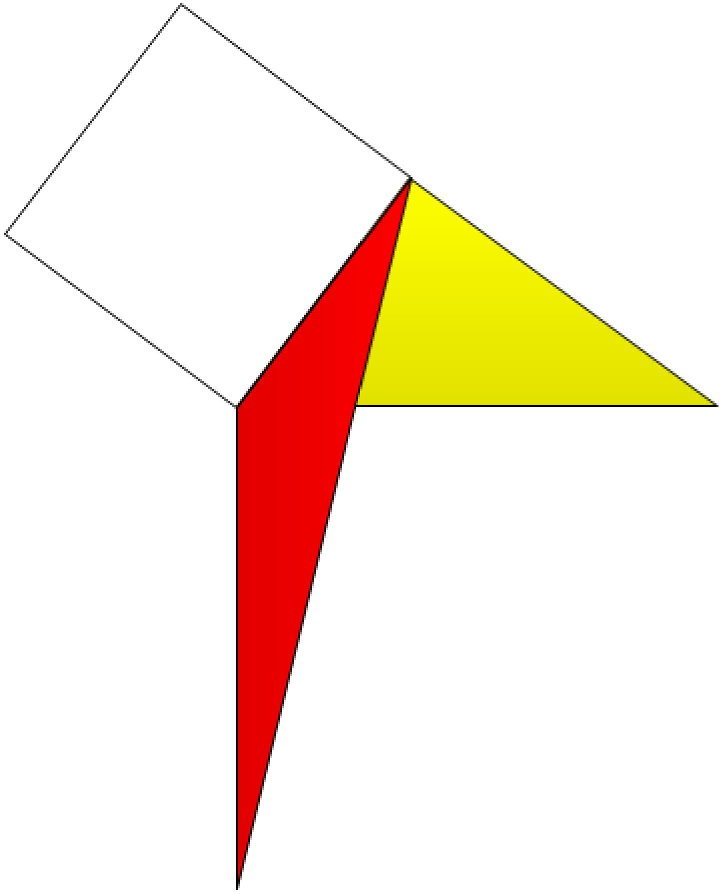

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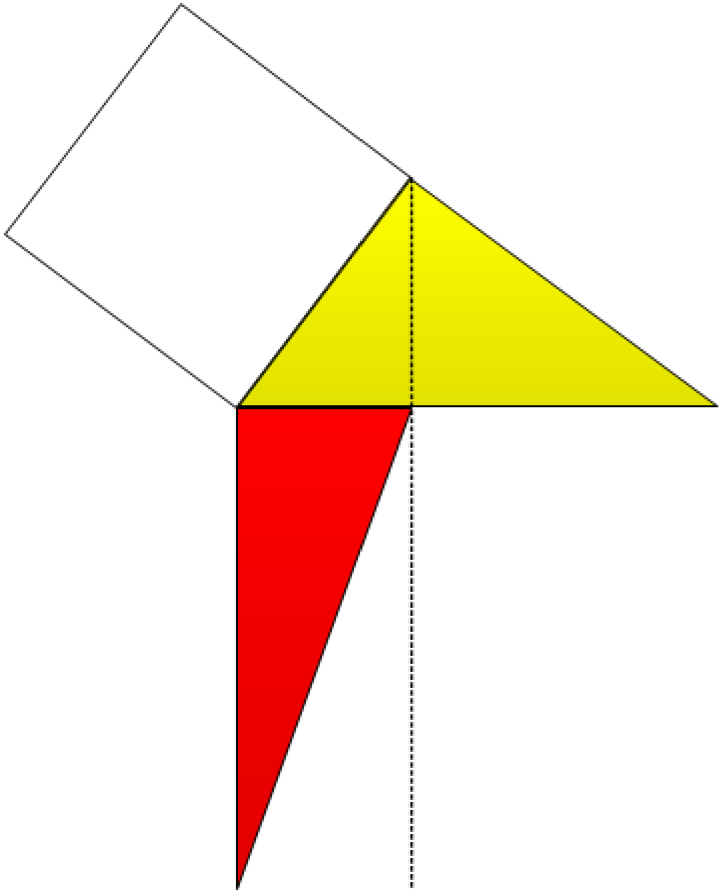

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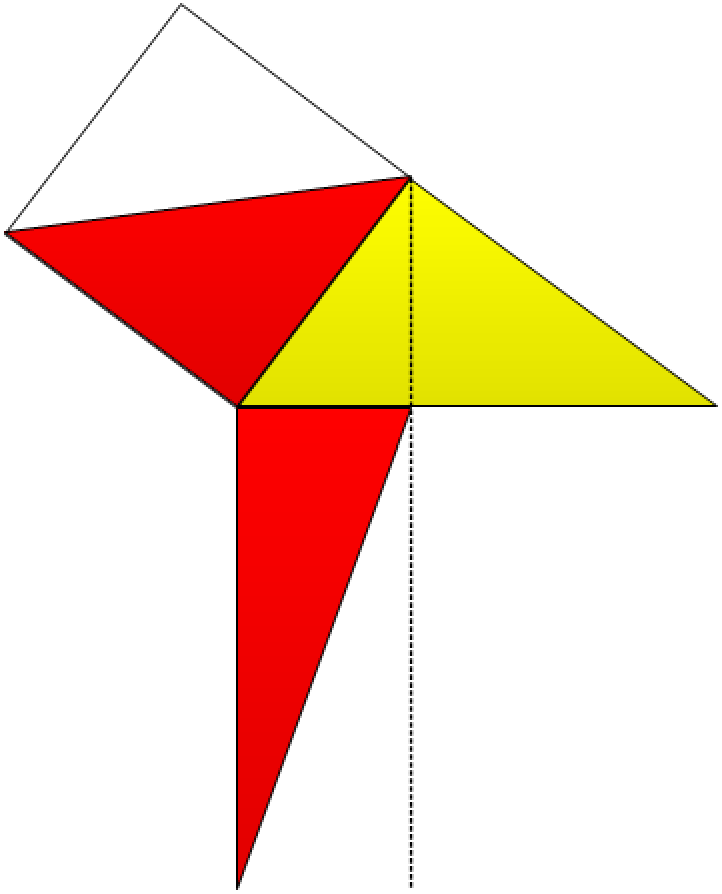

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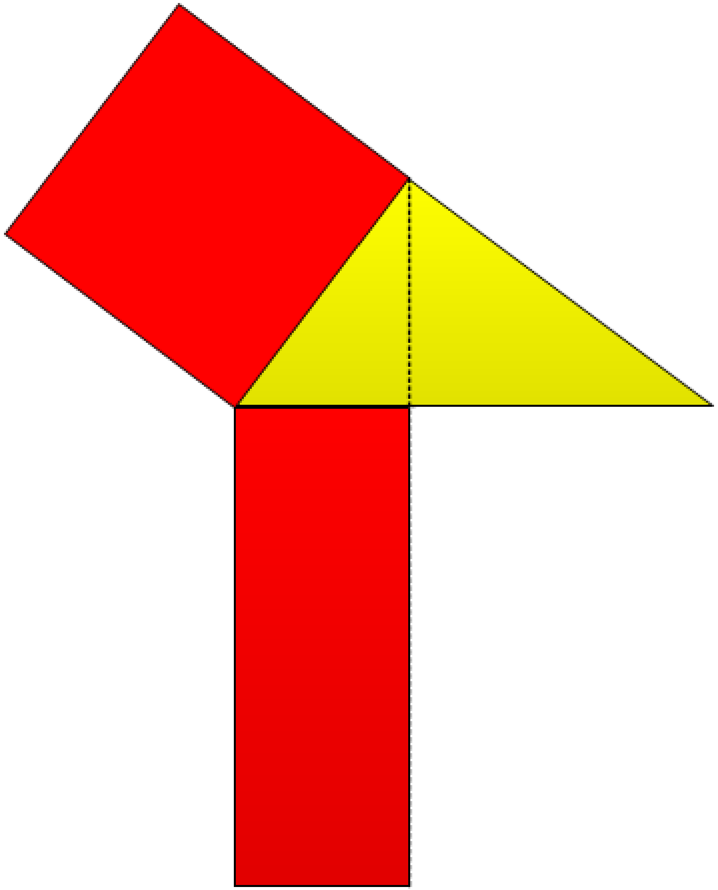

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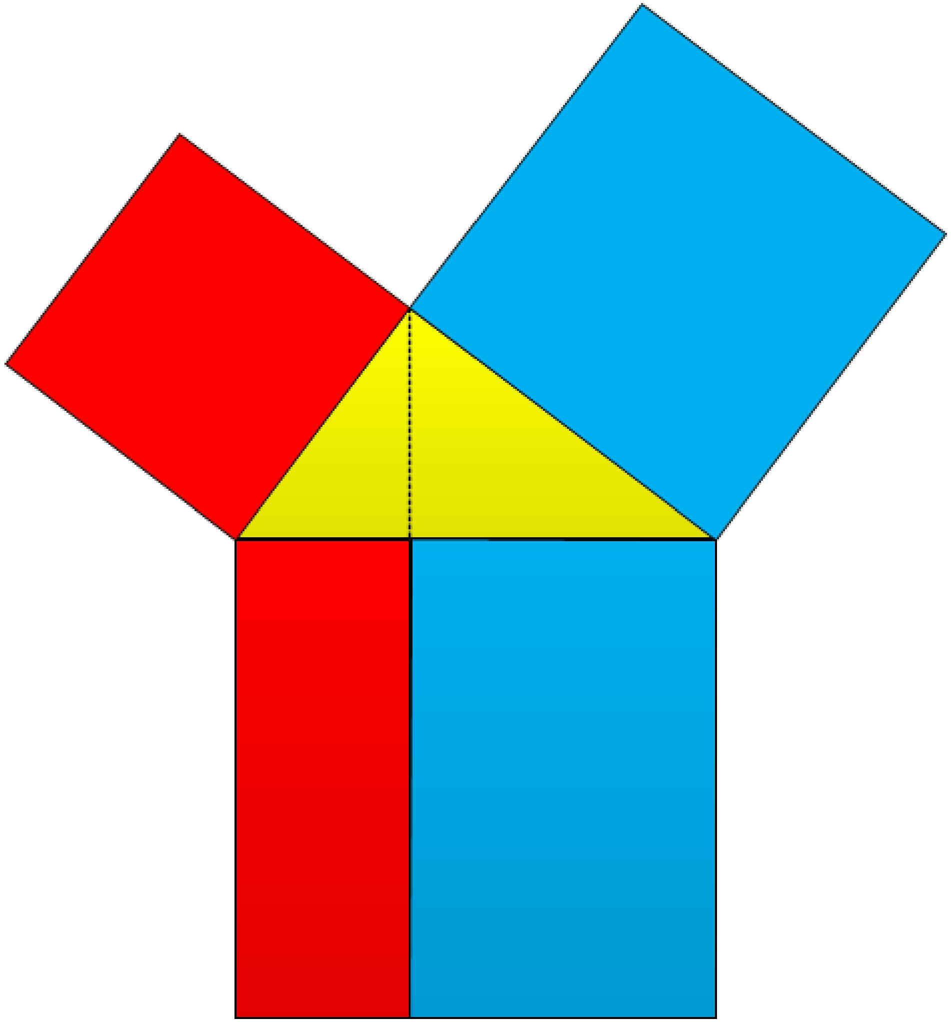
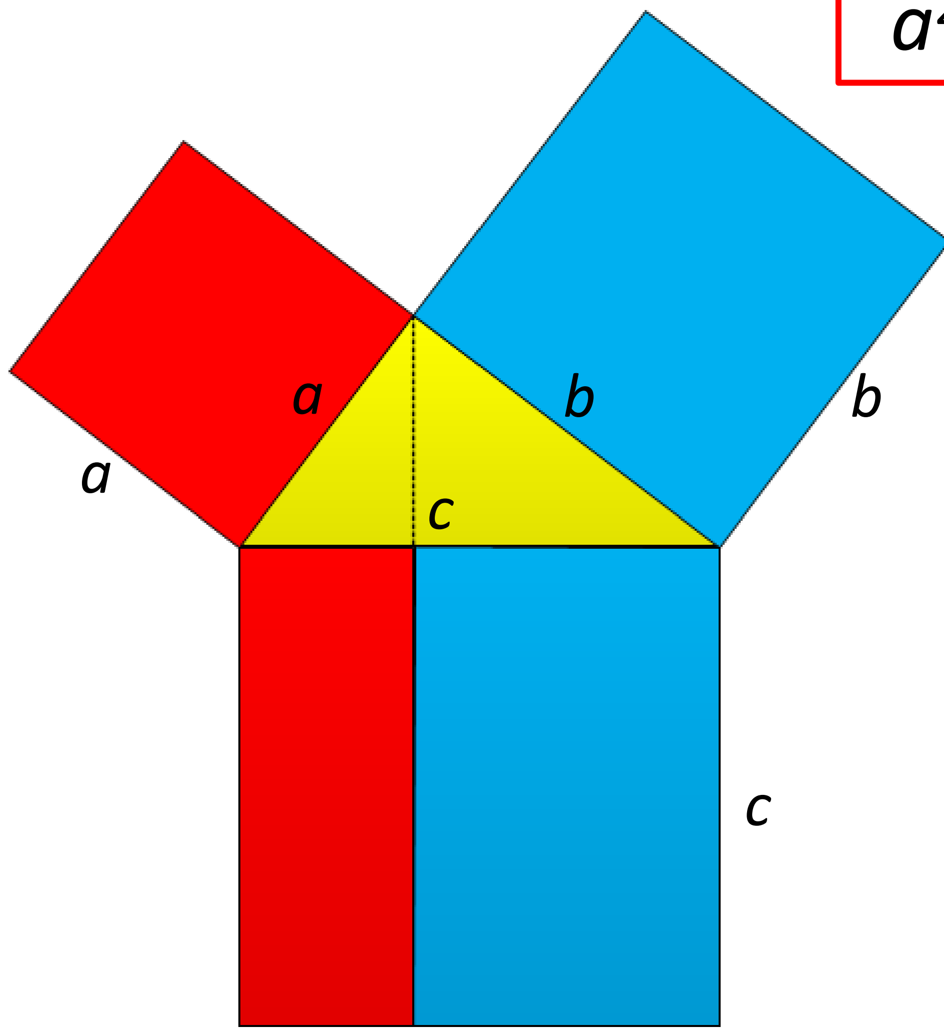
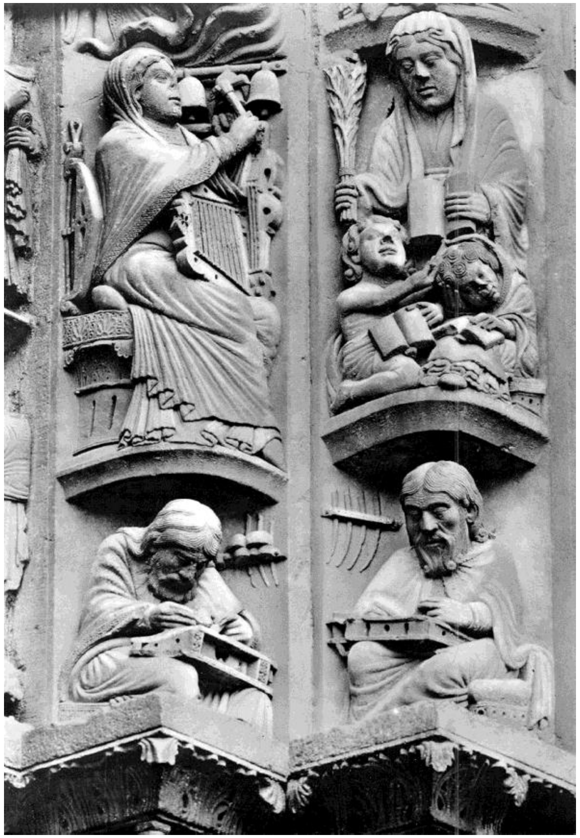


Pythagoras' Theorem

$$\boxed{a^2 + b^2 = c^2}$$

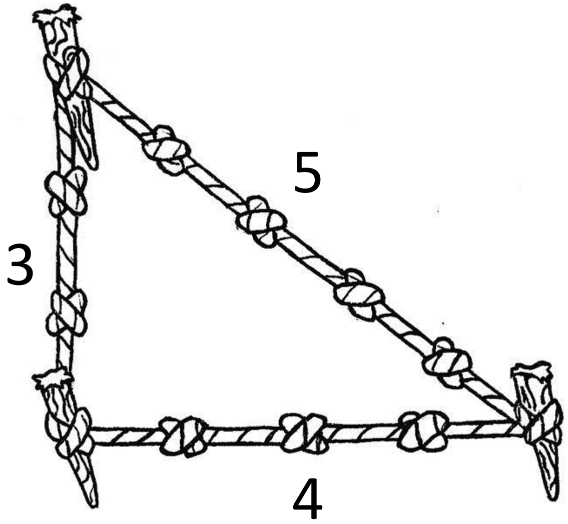


Pythagoras' Theorem



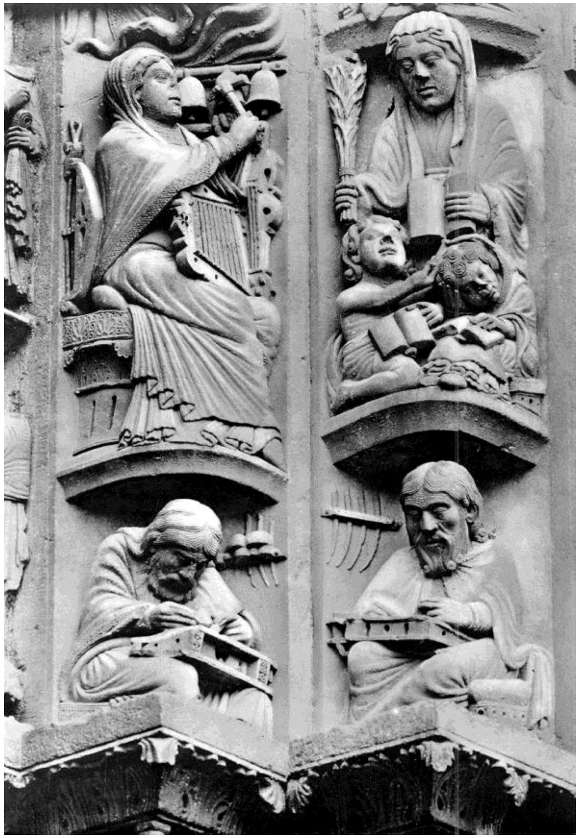
Pythagoras at Chartres Cathedral

$$\boxed{3^2 + 4^2 = 5^2}$$



Pythagoras' Theorem

Music



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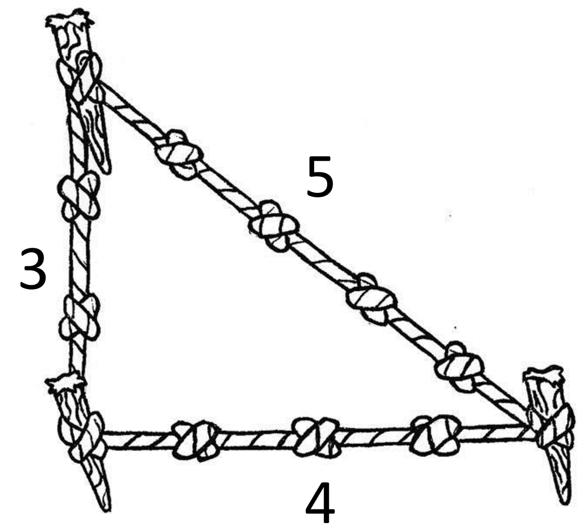
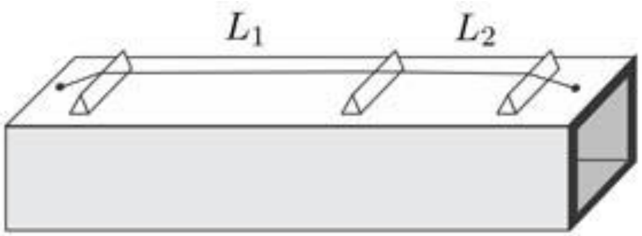


Pythagoras and Music



Can the ratios of small numbers give us a perfect musical system?

$$L_1 = 1/2,\ L_2 = 1/2: \quad \text{unison;}$$
$$L_1 = 1/3,\ L_2 = 2/3: \quad \text{octave;}$$
$$L_1 = 3/5,\ L_2 = 2/5: \quad \text{perfect fifth;}$$
$$L_1 = 4/7,\ L_2 = 3/7: \quad \text{perfect fourth}$$

Two intervals that add up to an octave are each other's inversions: e.g. 3/2 x 4/3 = 2, so a fourth is the inversion of the fifth, etc.

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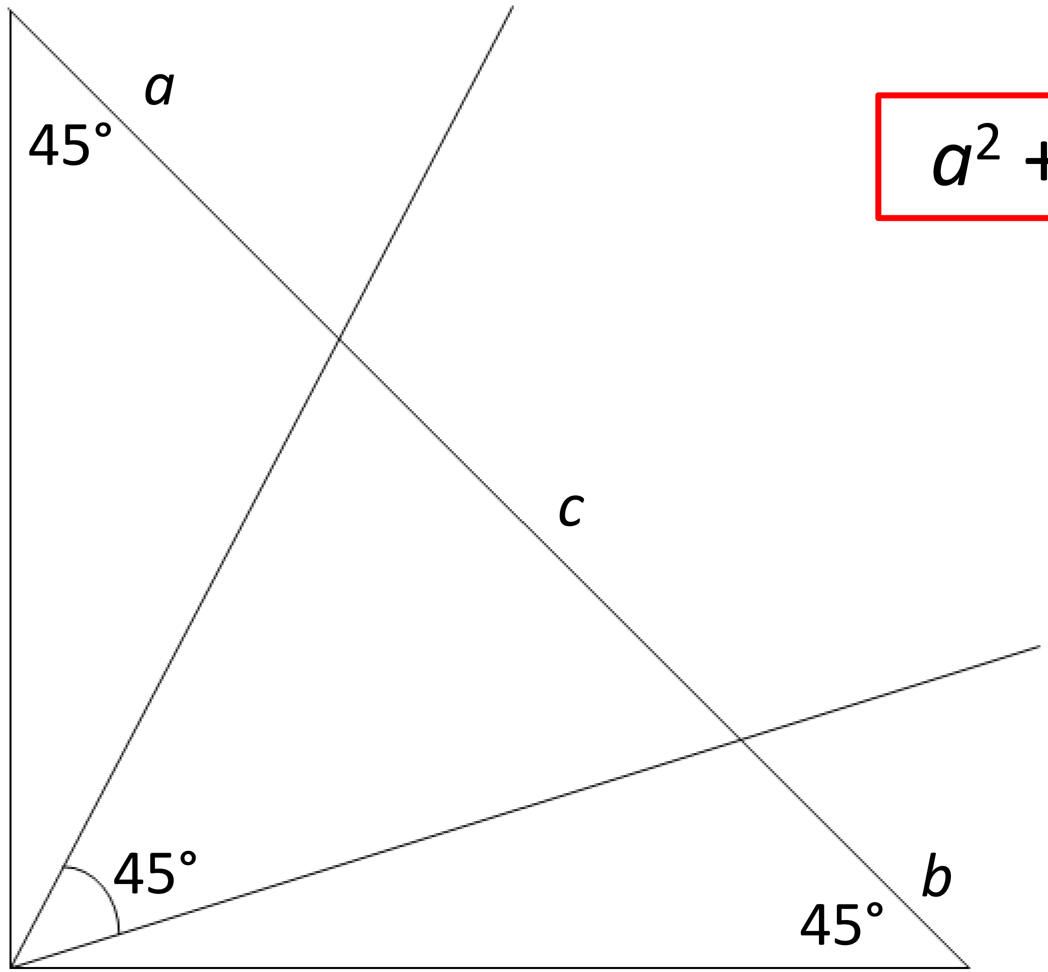
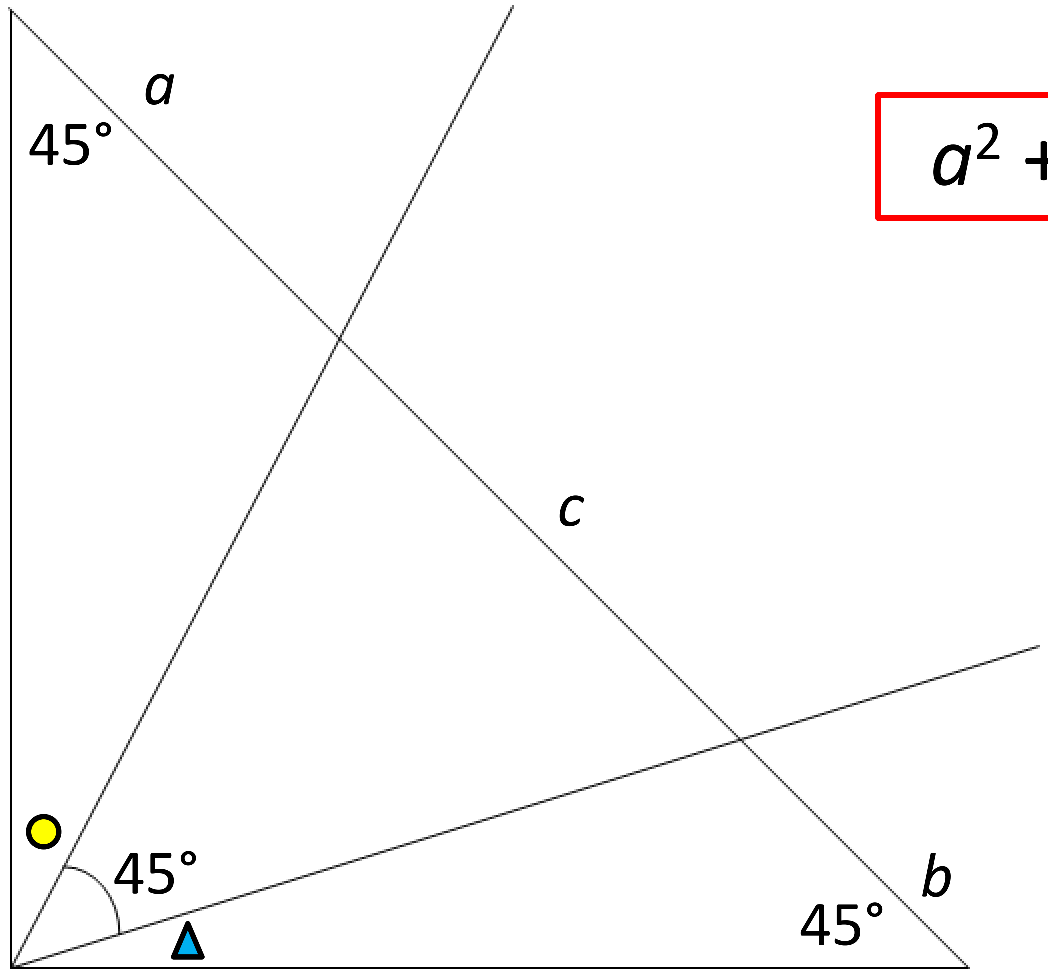
Pythagoras’ Theorem



$$a^2 + b^2 = c^2$$

Pythagoras' Theorem



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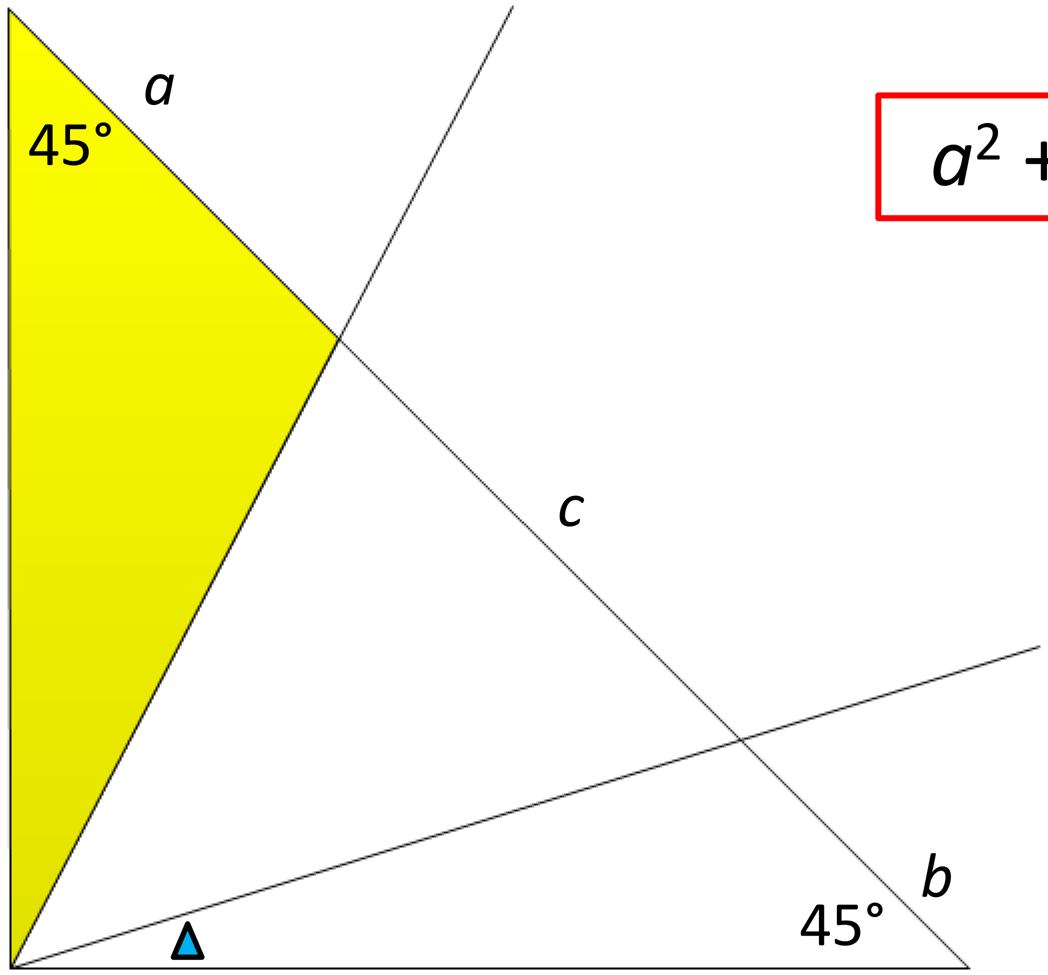

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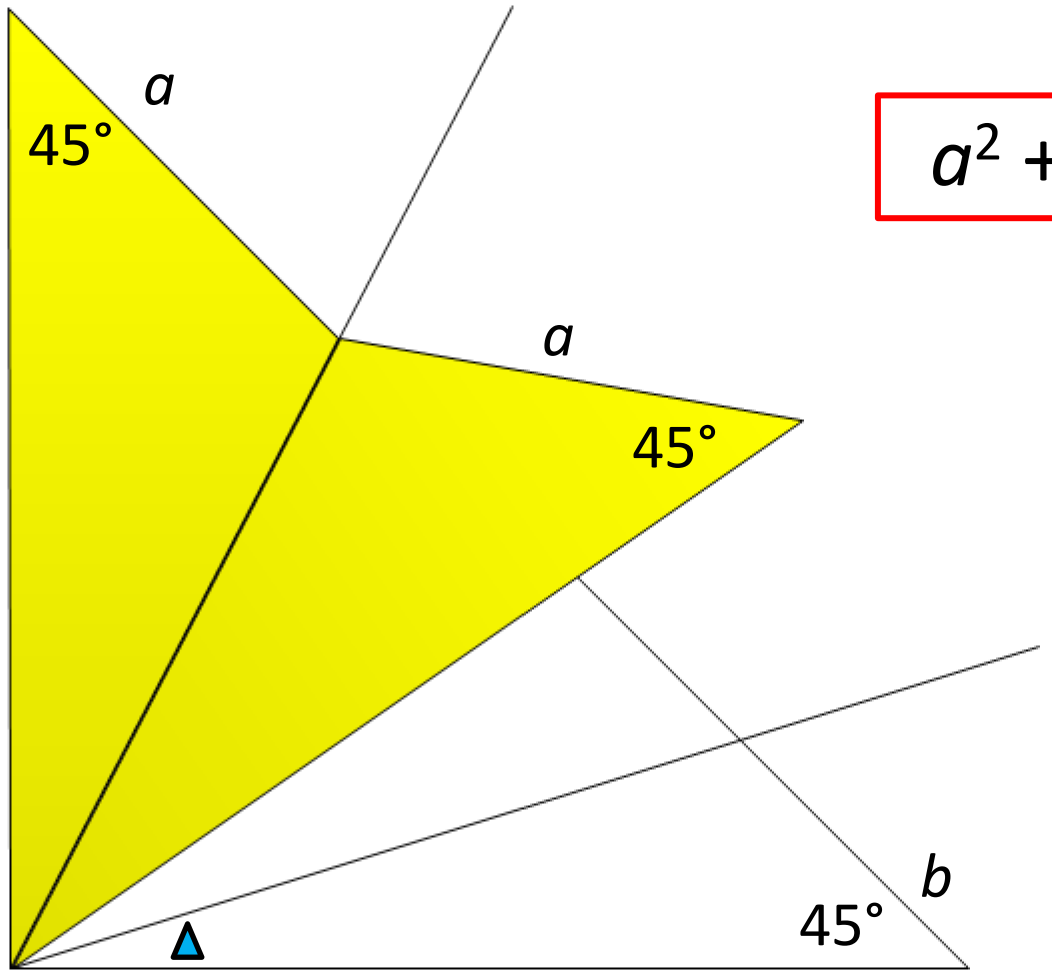

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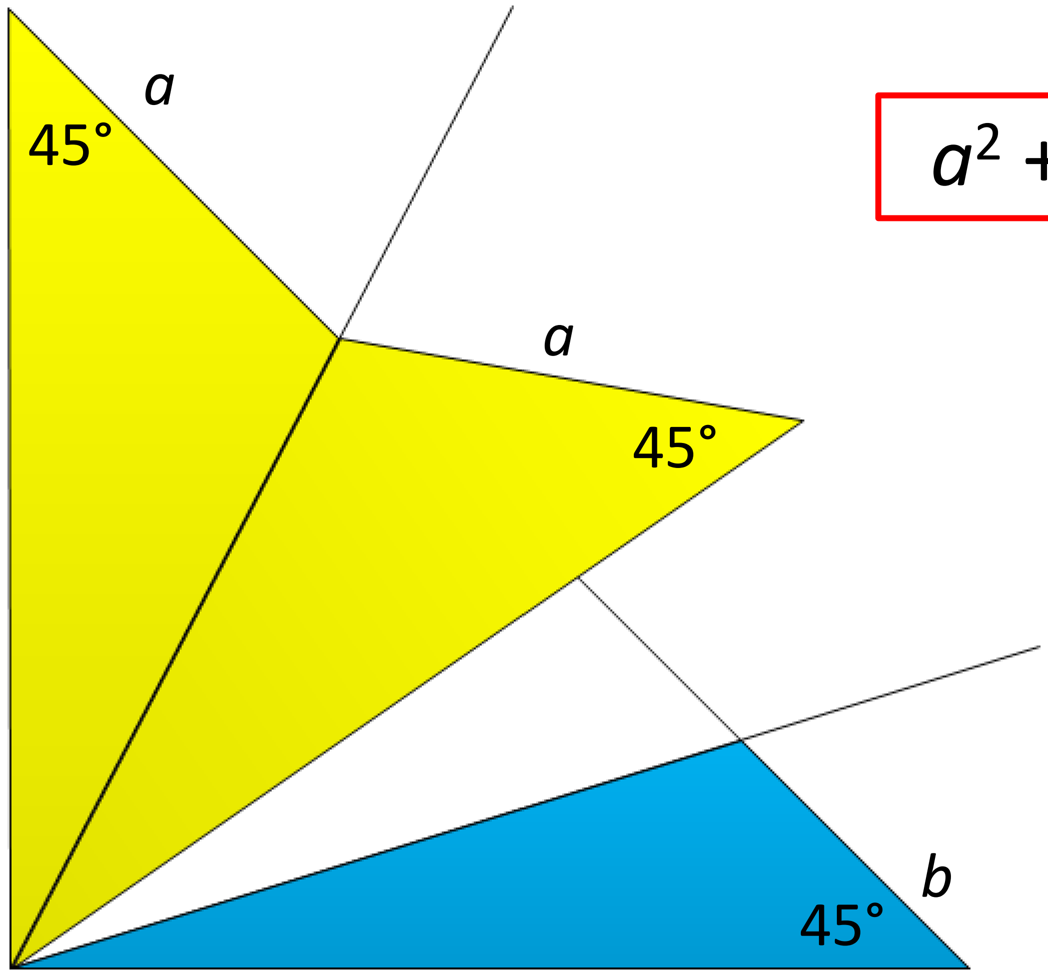

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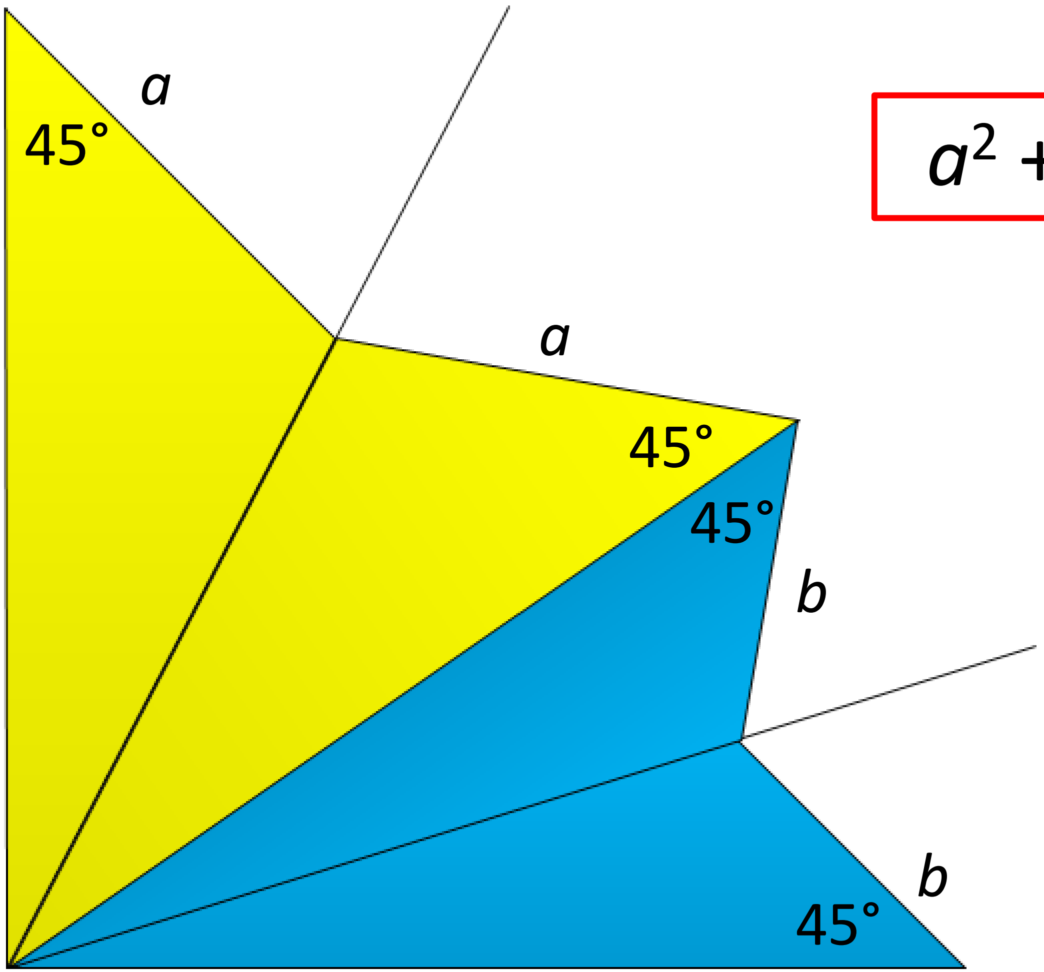
Pythagoras' Theorem



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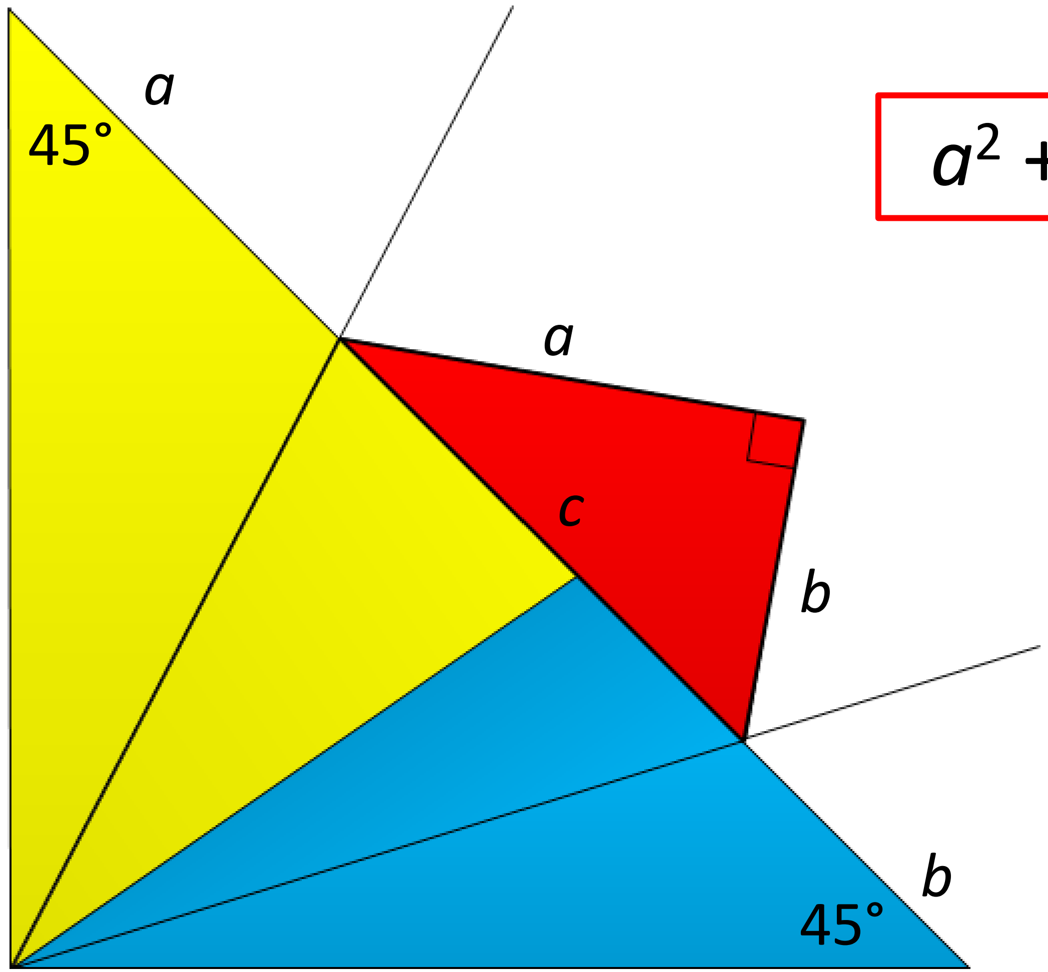
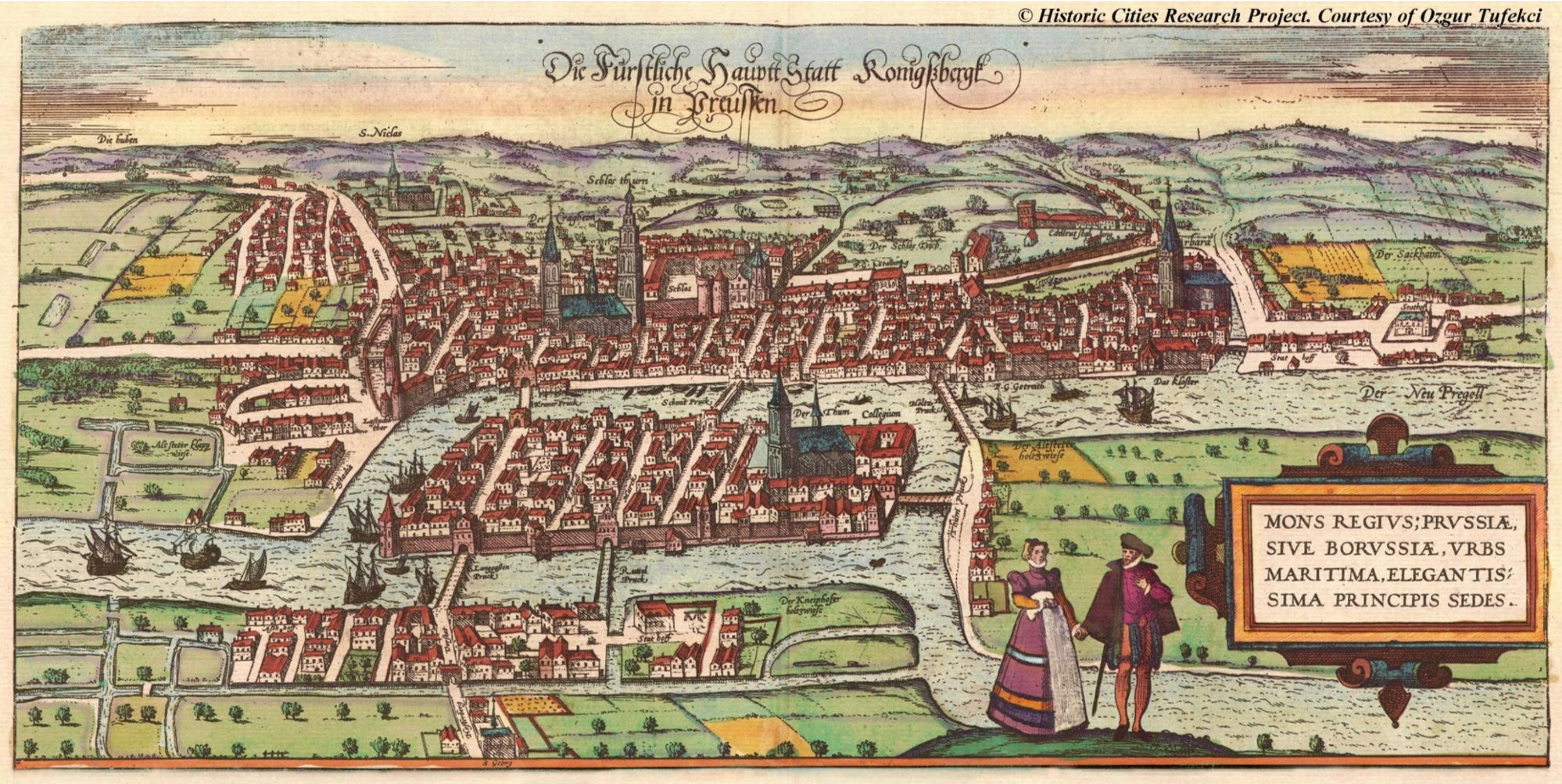
Pythagoras' Theorem



$$\boxed{a^2 + b^2 = c^2}$$

Seven Bridges of Königsberg (±1730)



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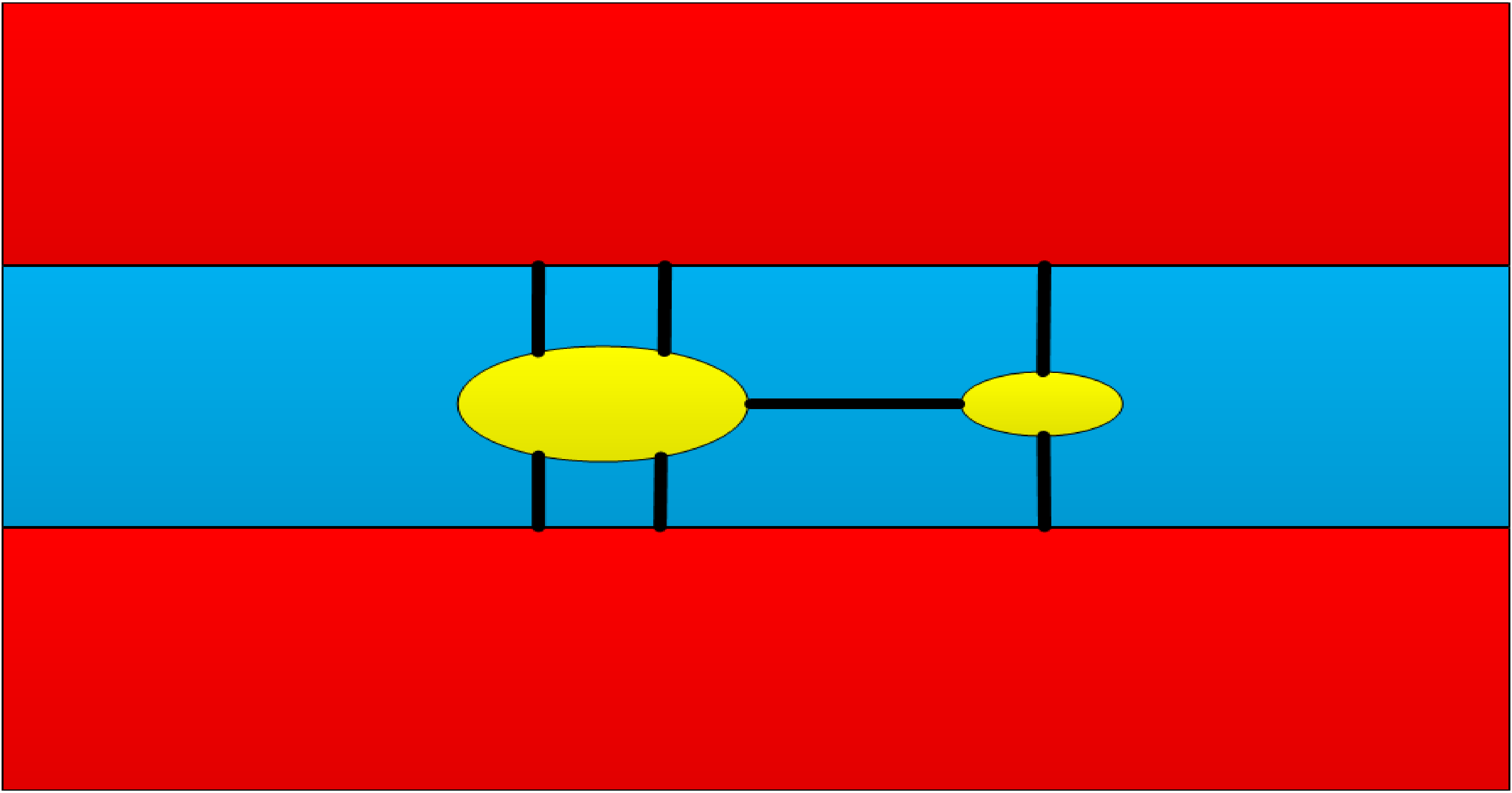
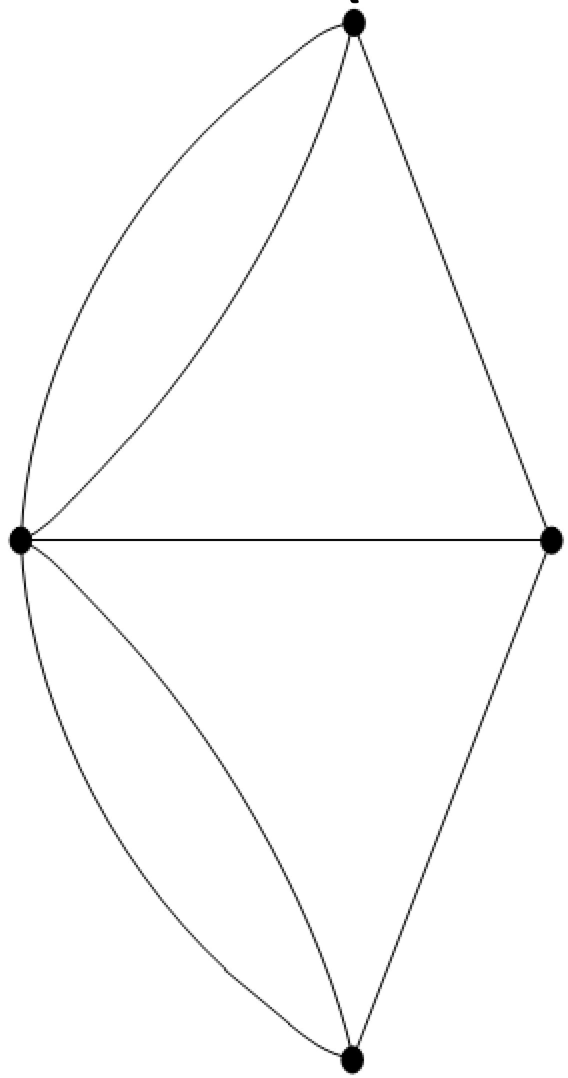


Leonard Euler (1707-1783)



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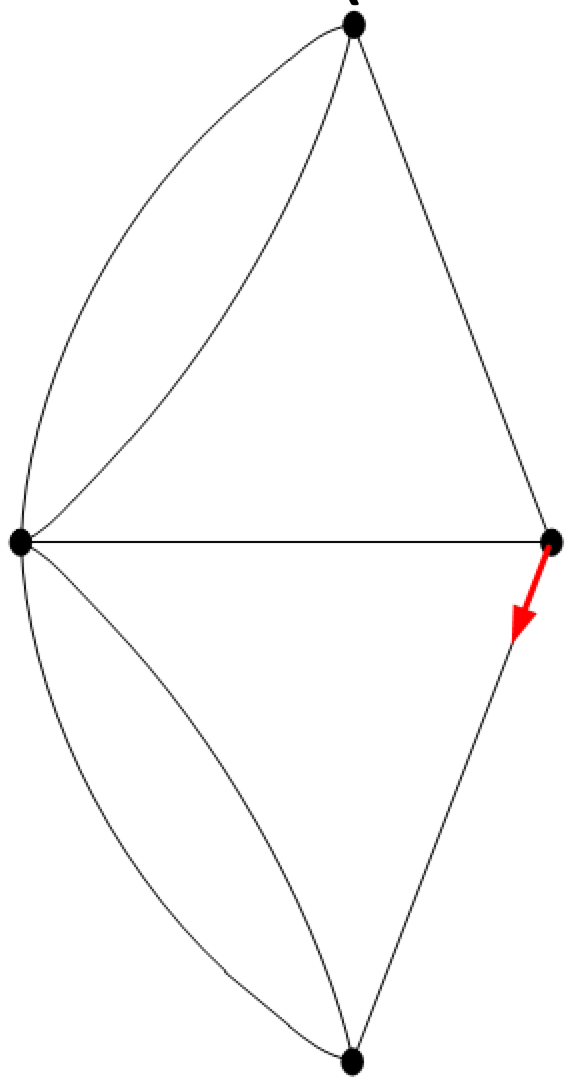

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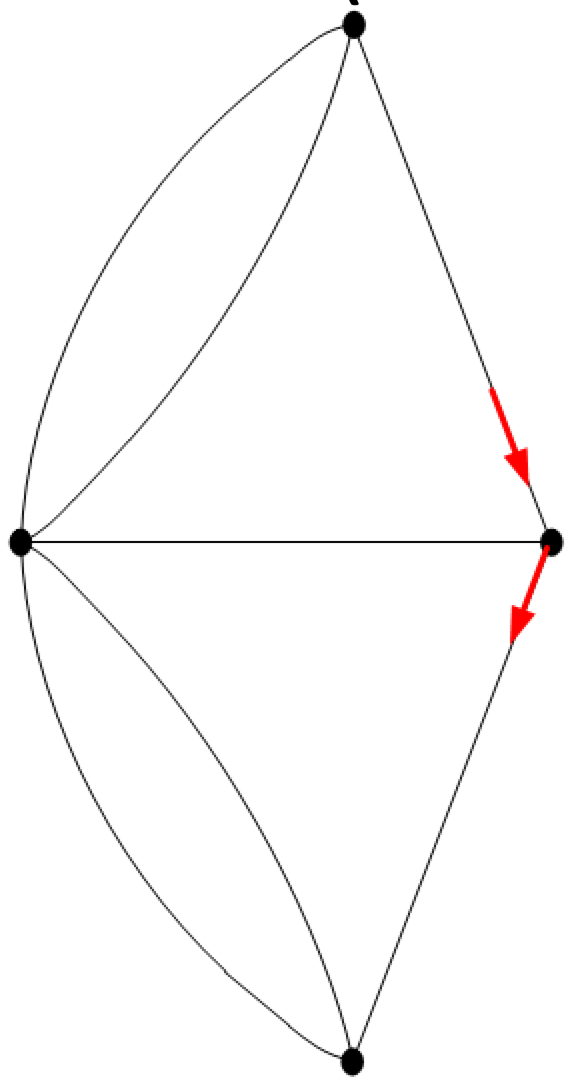

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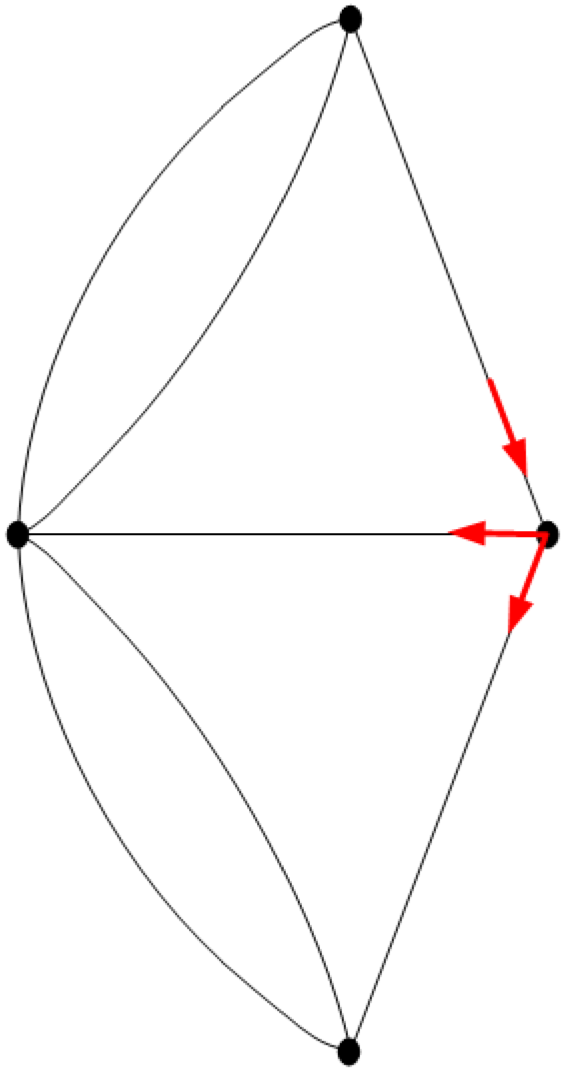

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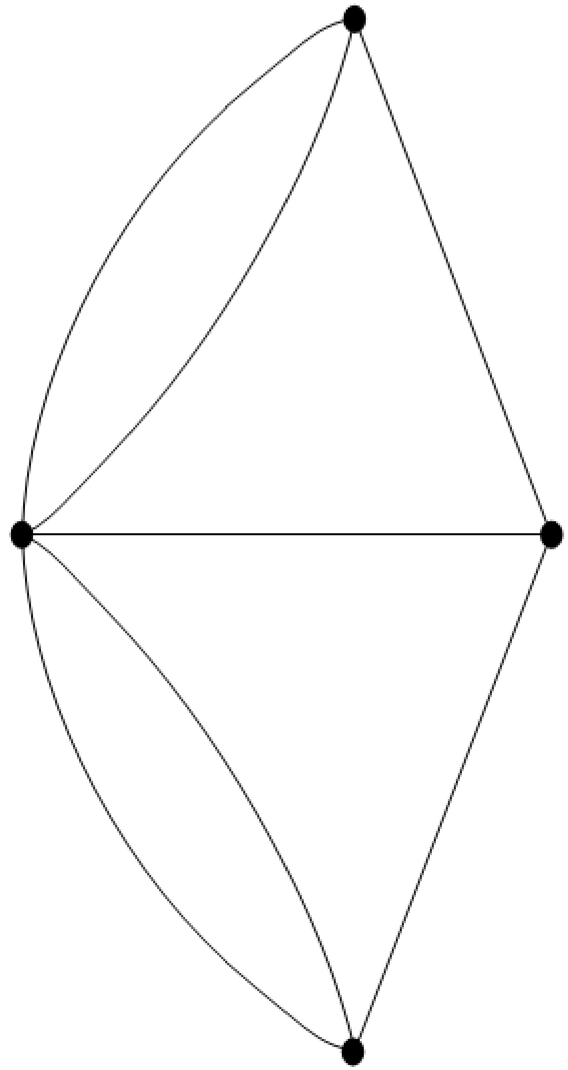
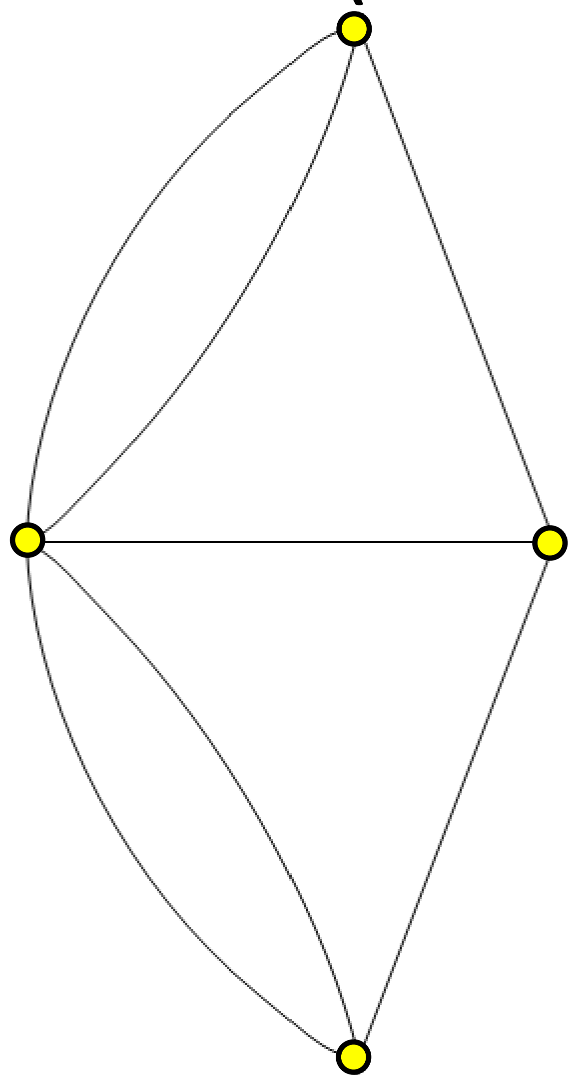


$$V - E + F = 2$$

Leonard Euler (1707-1783)



$$V - E + F = 2$$

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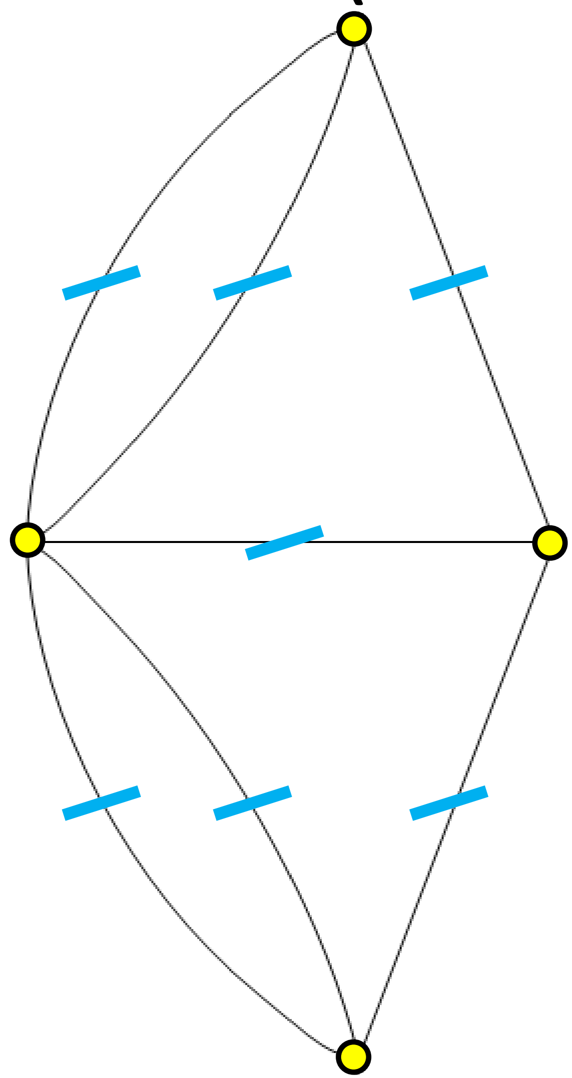
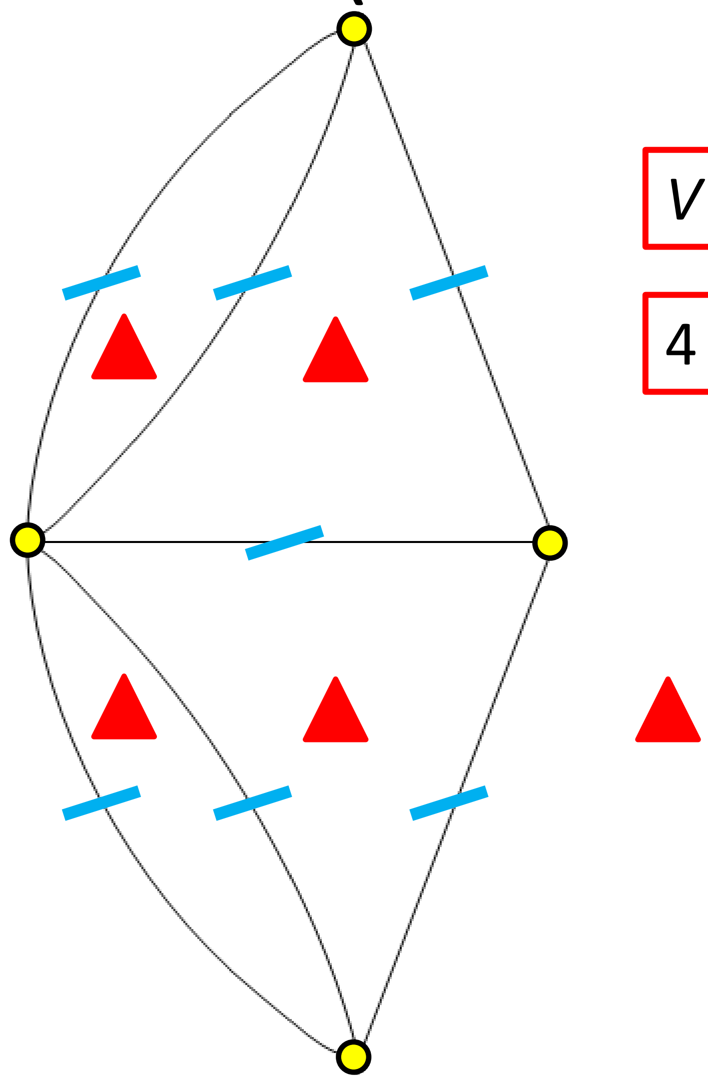
Leonard Euler (1707-1783)



$$V - E + F = 2$$

$$4 - 7$$

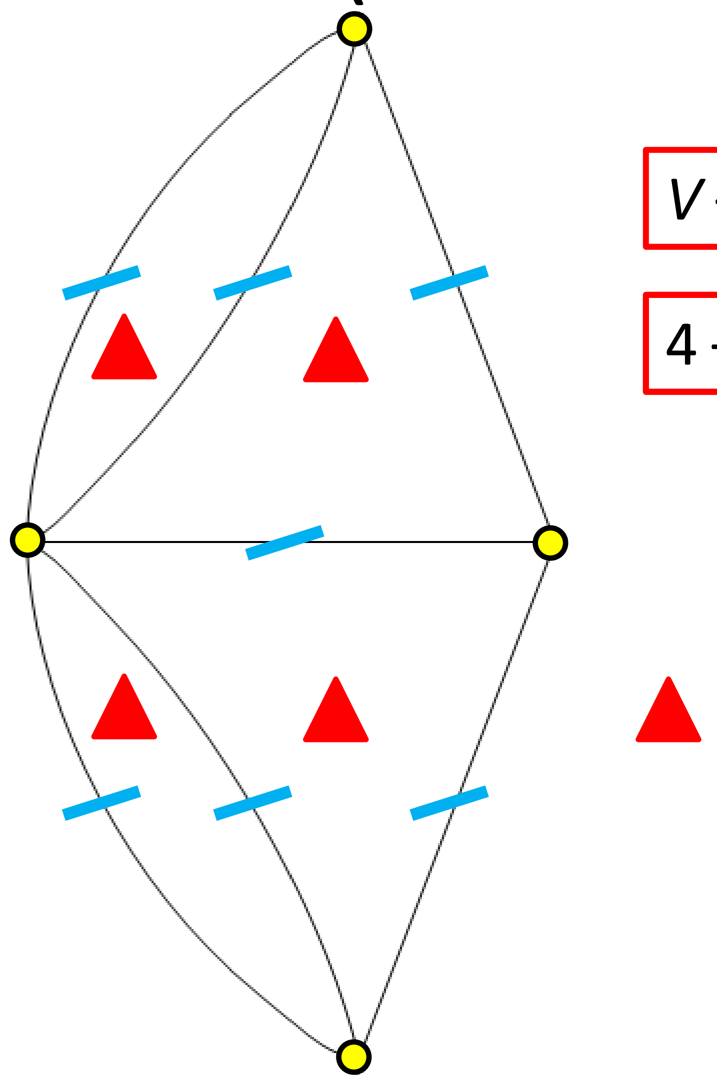
Leonard Euler (1707-1783)



$V - E + F = 2$

$4 - 7 + 5$

Leonard Euler (1707-1783)



$$V - E + F = 2$$

$$4 - 7 + 5 = 2$$

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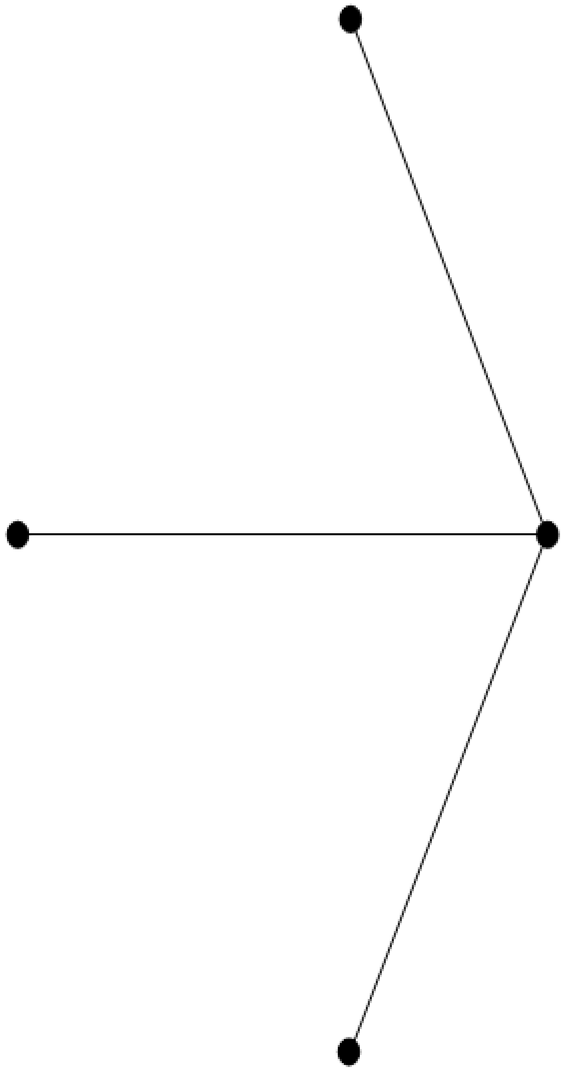
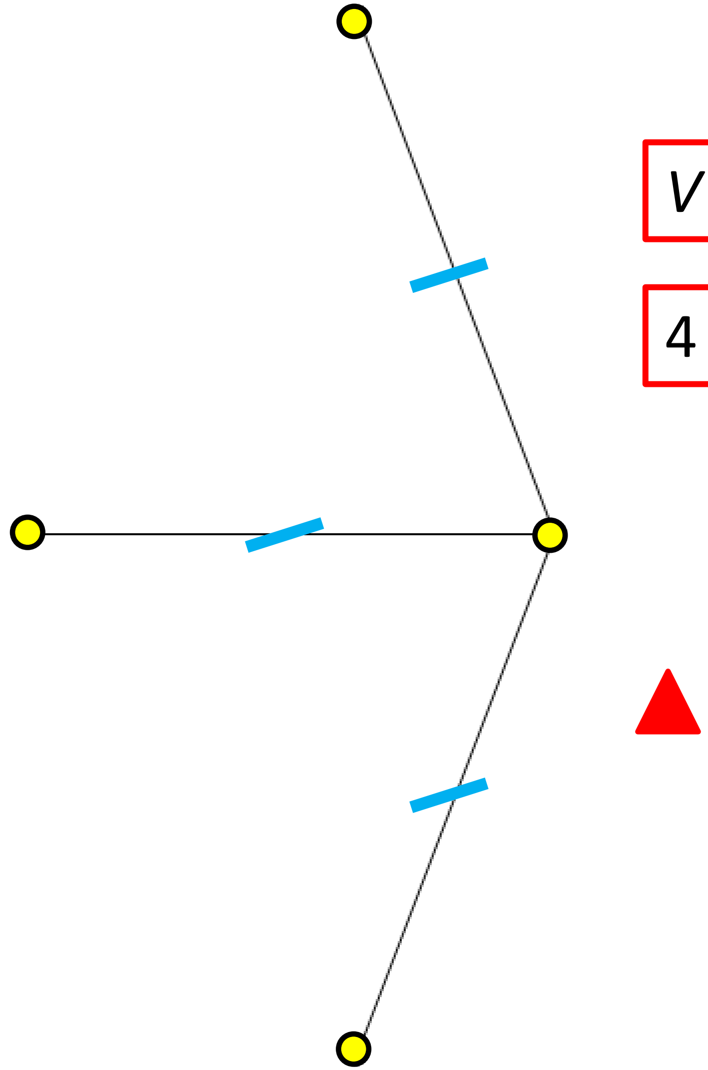
Leonard Euler (1707-1783)



$$\boxed{V - E + F = 2}$$

Leonard Euler (1707-1783)



$$V - E + F = 2$$

$$4 - 3 + 1 = 2$$

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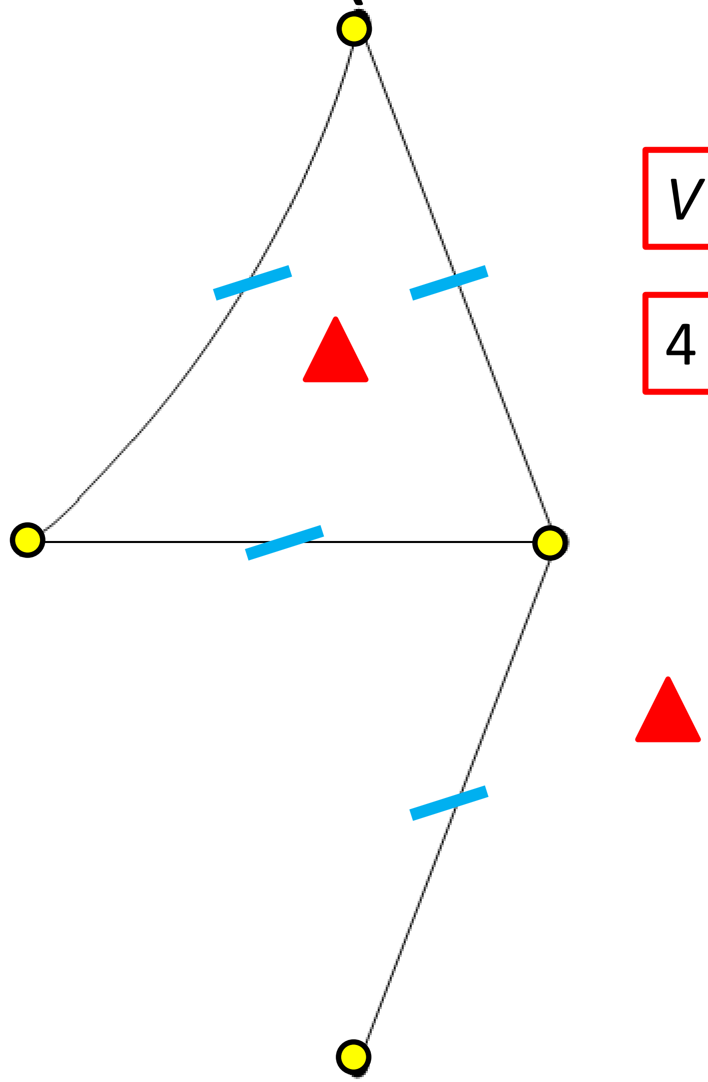
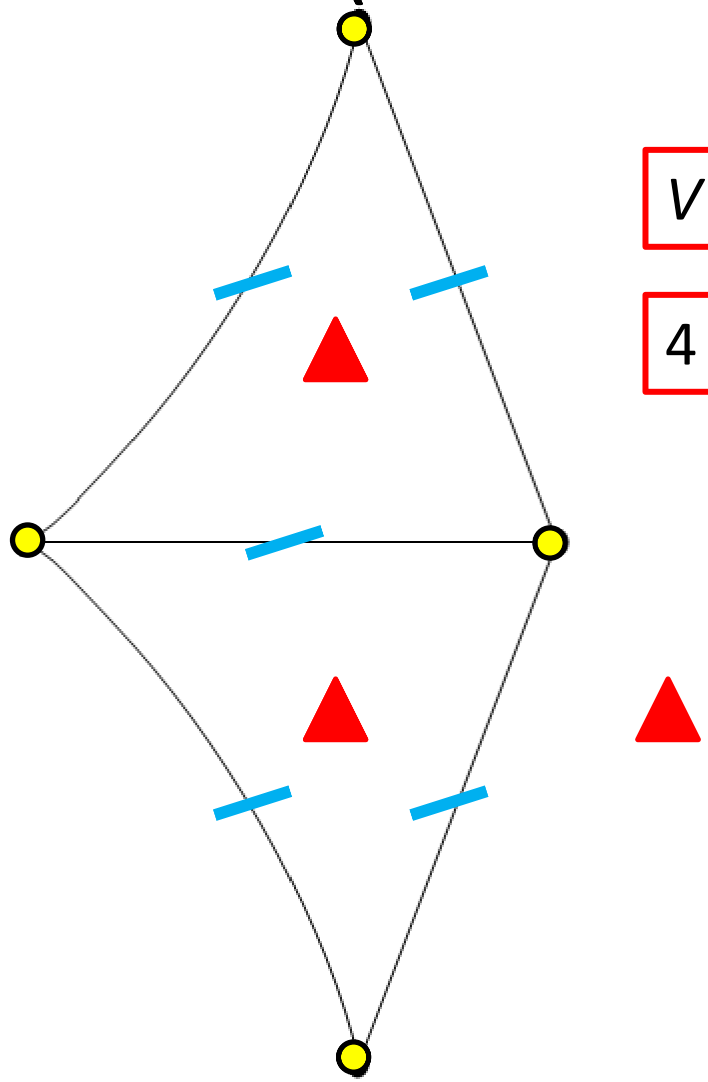
Leonard Euler (1707-1783)



$$V - E + F = 2$$

$$4 - 4 + 2 = 2$$

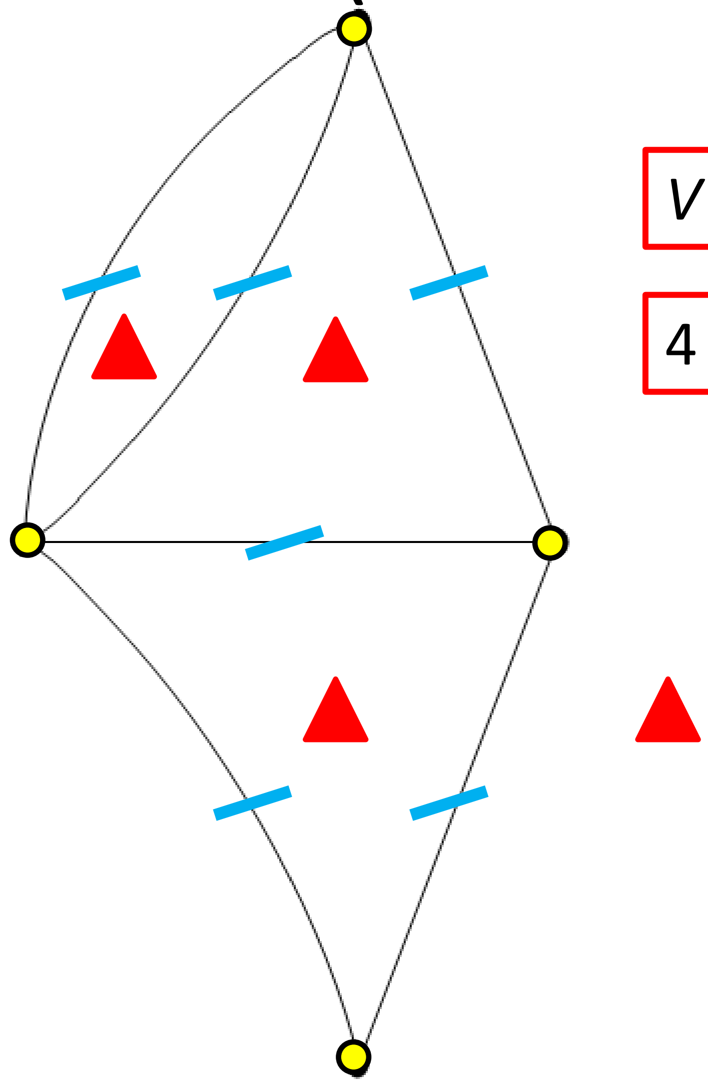
Leonard Euler (1707-1783)



$$\boxed{V - E + F = 2}$$

$$\boxed{4 - 5 + 3 = 2}$$

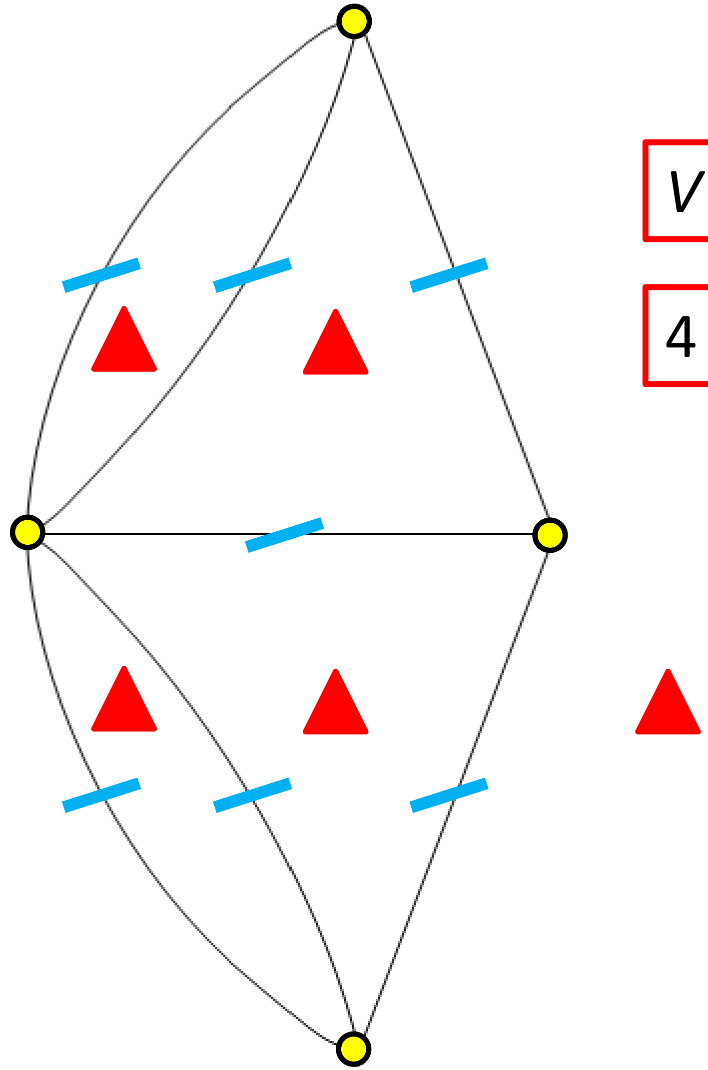
Leonard Euler (1707-1783)



$$V - E + F = 2$$

$$4 - 6 + 4 = 2$$

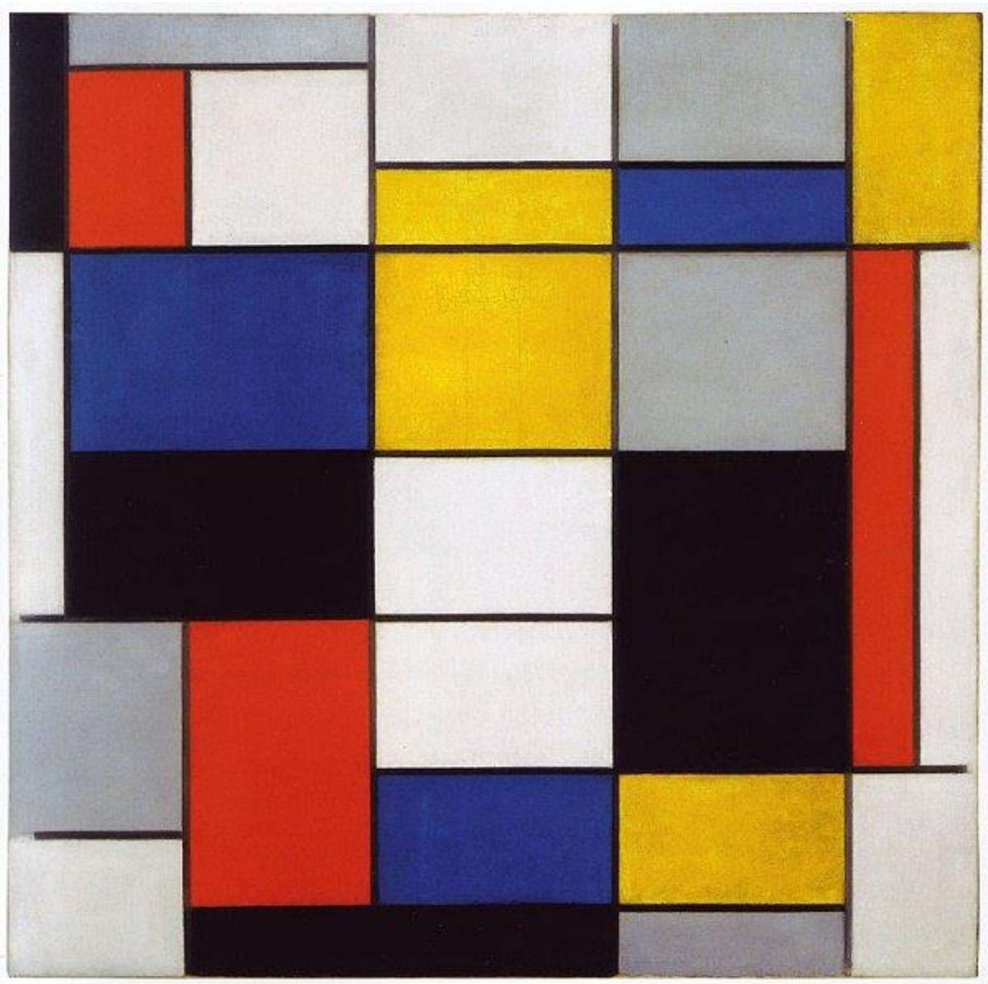
Leonard Euler (1707-1783)



$$V - E + F = 2$$

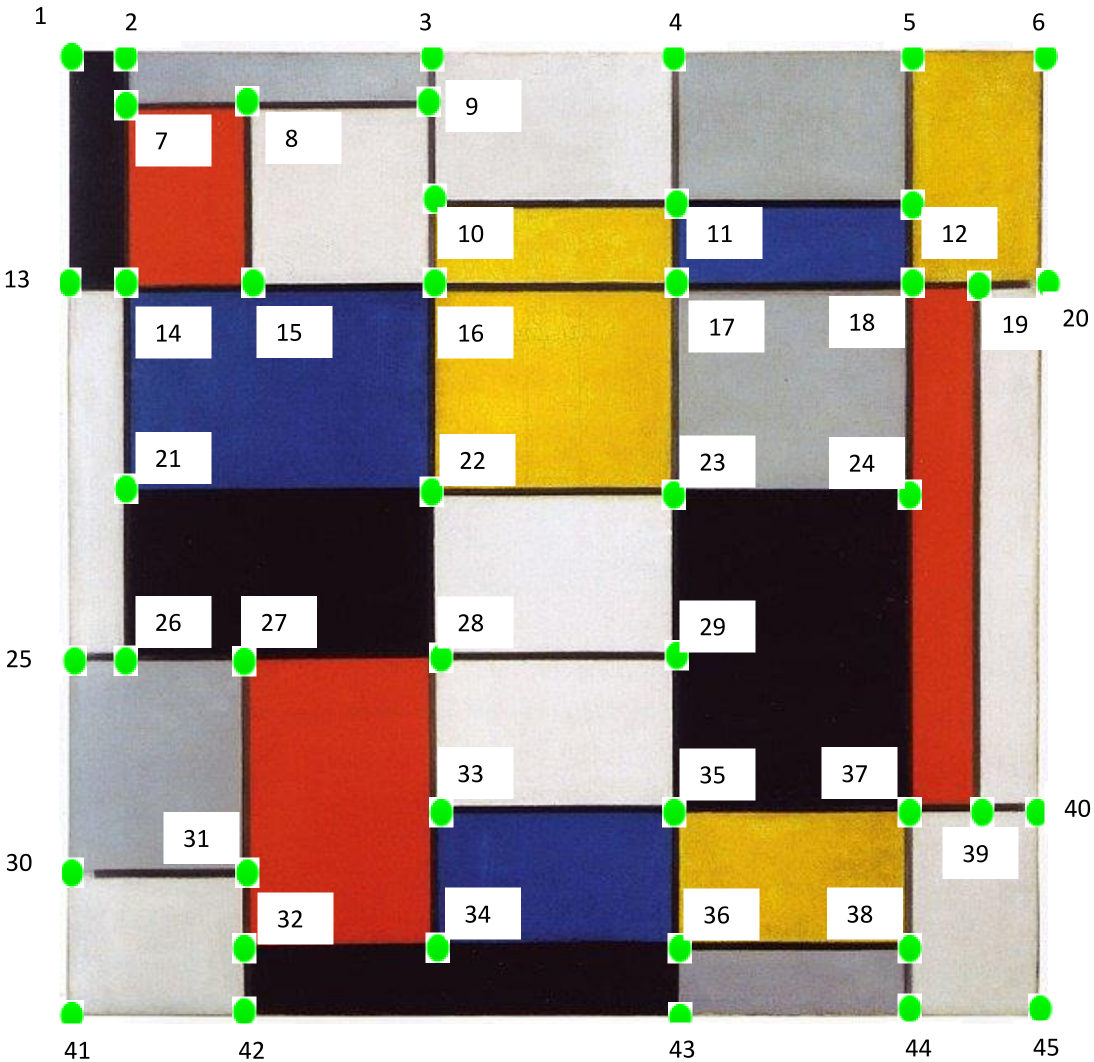
$$4 - 7 + 5 = 2$$

Euler and Mondriaan



$$\boxed{V - E + F = 2}$$

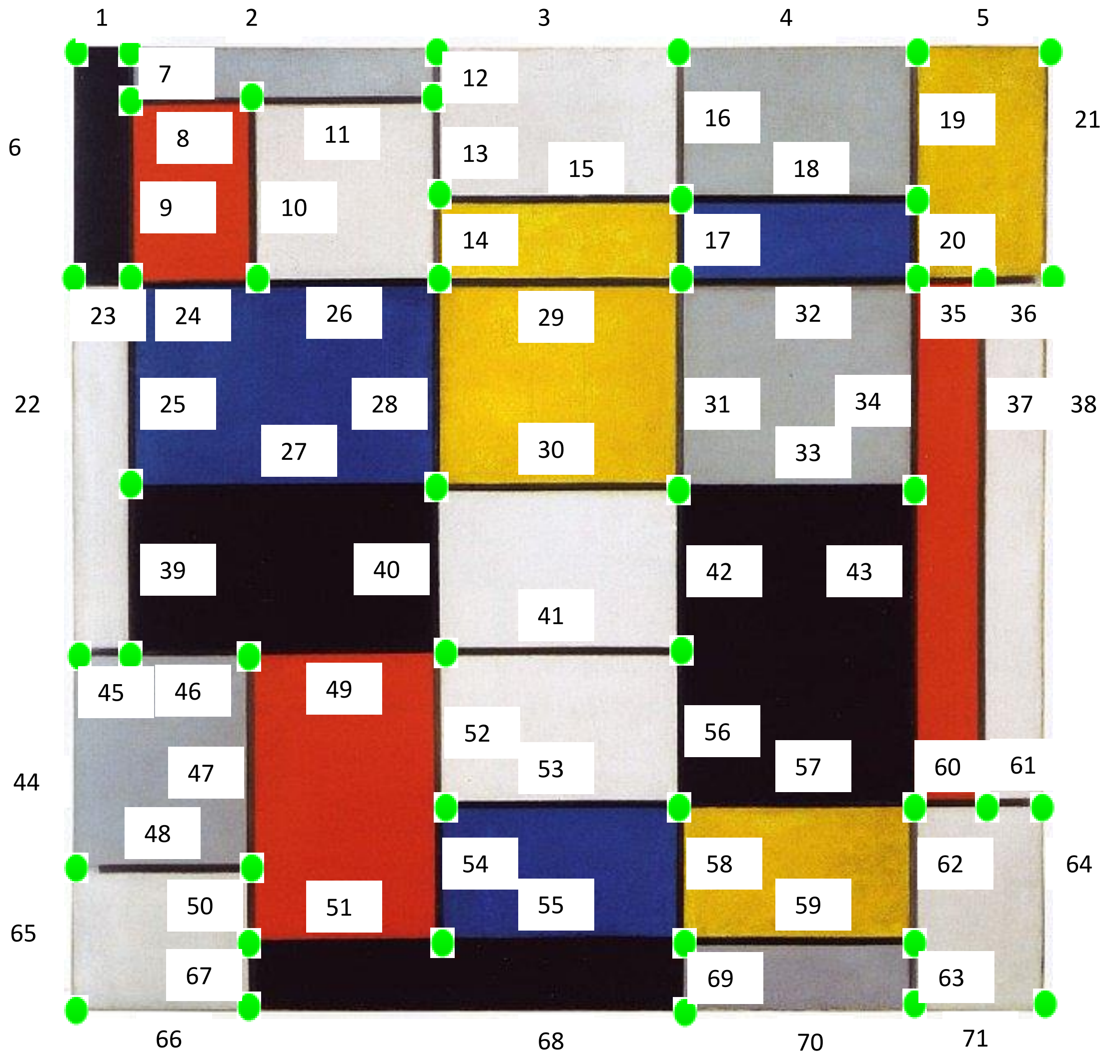
Euler and Mondriaan



$$\boxed{V - E + F = 2}$$

$\boxed{45}$

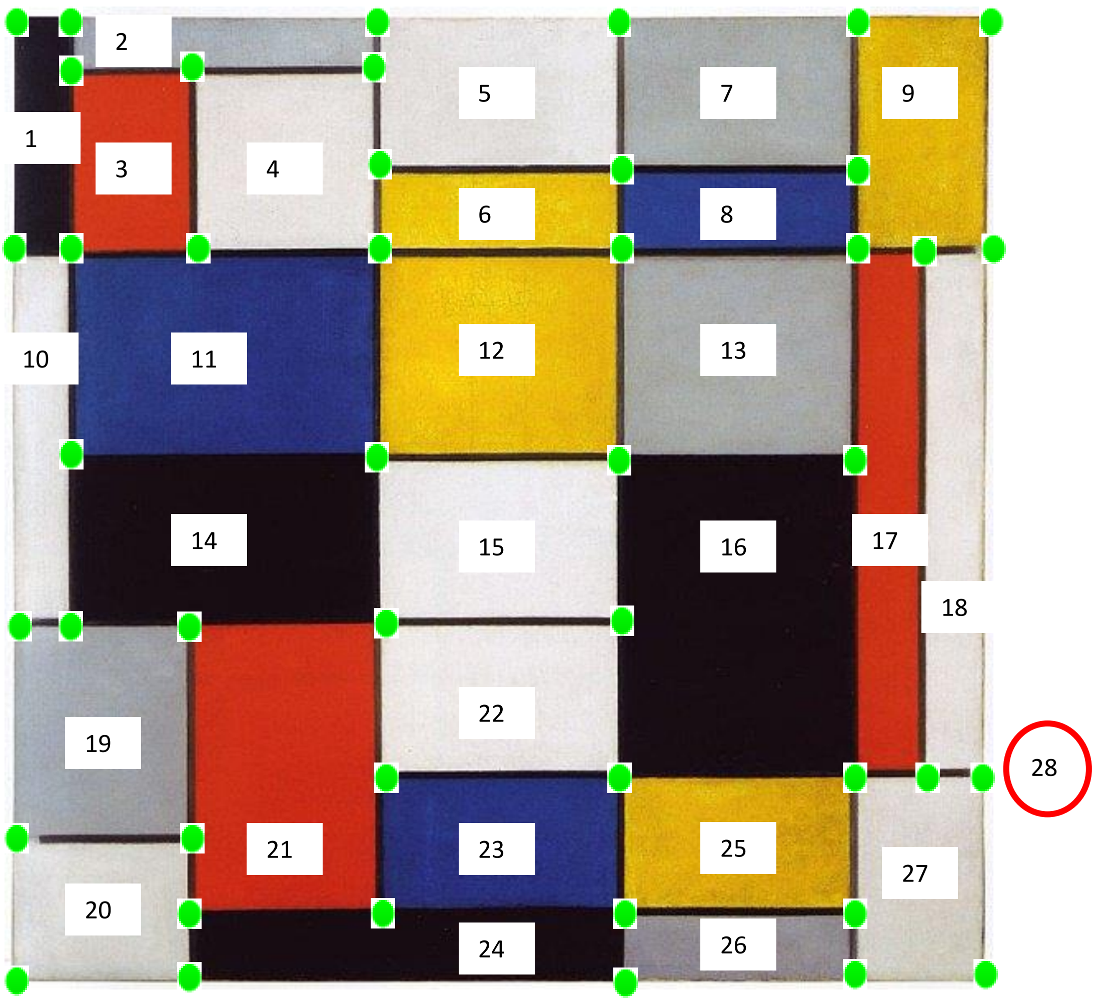
Euler and Mondriaan



$$\boxed{V - E + F = 2}$$

$$\boxed{45 - 71}$$

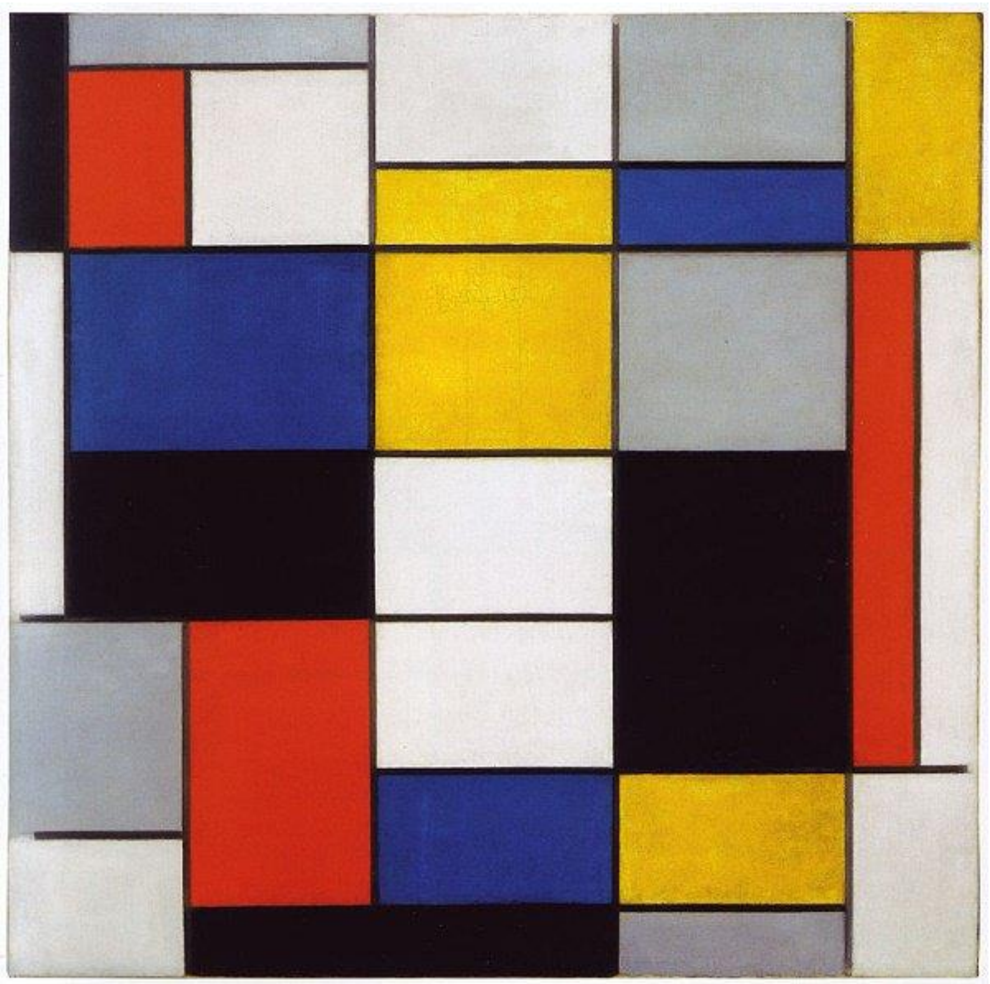
Euler and Mondriaan



$$\boxed{V - E + F = 2}$$

$$\boxed{45 - 71 + 28}$$

Euler and Mondriaan



$$\boxed{V - E + F = 2}$$

$$\boxed{45 - 71 + 28 = 2}$$

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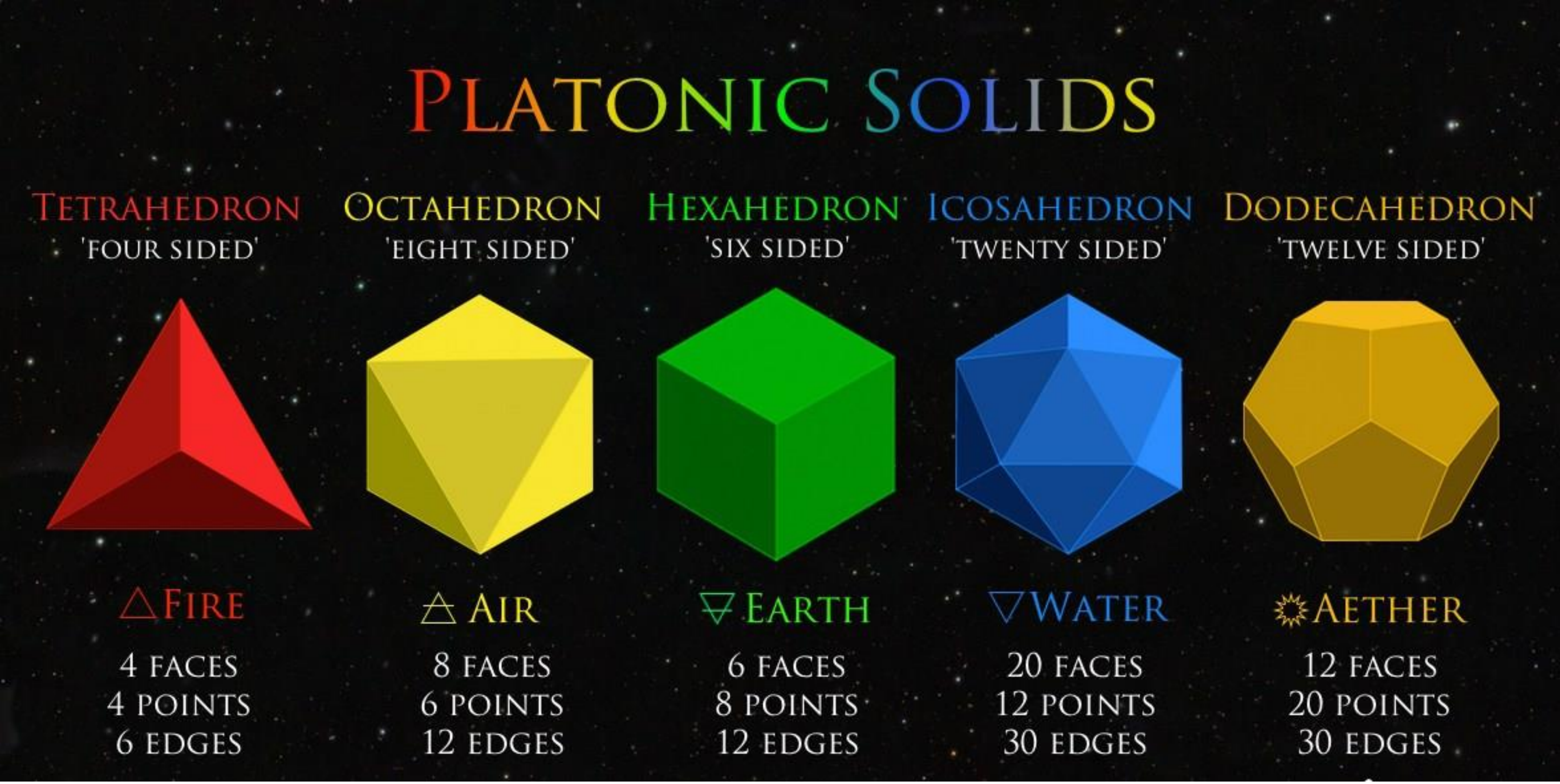

$V - E + F = 2$	$V - E + F = 2$	$V - E + F = 2$	$V - E + F = 2$	$V - E + F = 2$
$4 - 6 + 4 = 2$	$6 - 12 + 8 = 2$	$8 - 12 + 6 = 2$	$12 - 30 + 20 = 2$	$20 - 30 + 12 = 2$

Beautiful Numbers

Beautiful Numbers

π = 3.14159…

Beautiful Numbers

π = 3.14159...   half circumference of circle with radius 1

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Beautiful Numbers

π = 3.14159… half circumference of circle with radius 1

e = 2.71828…

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Beautiful Numbers

π = 3.14159… half circumference of circle with radius 1

e = 2.71828… $e = 1 + \frac{1}{1} + \frac{1}{2*1} + \frac{1}{3*2*1} + \frac{1}{4*3*2*1} + \cdots$

Beautiful Numbers

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i = ?

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$\pi = 3.14159\ldots$ half circumference of circle with radius 1

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$i = ?$ $i^2 = -1$, i is an imaginary number

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$$\boxed{e^{\pi i} + 1 = 0}$$

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THANKS

Enjoy the Abstract
in Art and Beyond!

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THANKS

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$$\boxed{e^{\pi i} + 1 = 0}$$

THANKS