

*In memory of Justynke, my wife*

# FORMULAS

'The laws of nature are but the mathematical thoughts of God.'  
Euclid

FORMULA No.

**W03**

[www.and-just-math.com](http://www.and-just-math.com)

We are not mathematicians, but we love mathematics and create formulas ourselves.

'No other science boosts the faith in the strength of the human spirit like mathematics.'  
Hugo Steinhaus

**1 WEEK = 7 DAYS**  
**=**  
**7 FORMULAS**

**NEW MATHEMATICAL FORMULA DAILY**

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# FORMULAS

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FORMULA No.

**D031**

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$k \in N$

$$\sum_{k=1}^{k=\infty} \frac{64 \times k^4 + 448 \times k^3 + 1372 \times k^2 + 1392 \times k + 243}{(2 \times k + 7) \times (2 \times k + 9) \times (16 \times k^2 - 9) \times (16 \times k^2 - 1)} = \frac{\pi}{8}$$

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**D032**

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$$\sum_{k=1}^{k=\infty} \frac{48 \times k^2 - 48 \times k + 13}{(4 \times k - 3)^3 \times (4 \times k - 1)^3} = \frac{\pi^3}{64} \quad k \in \mathbb{N}$$

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FORMULA No.

**D033**

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(8 \times k^5 + 108 \times k^4 + 514 \times k^3 + 1037 \times k^2 + 923 \times k + 300) \times (2 \times k)!}{(k+1)^2 \times (2 \times k + 1) \times (2 \times k + 3)^2 \times (2 \times k + 5) \times k!^2 \times 2^{4 \times k + 2}} = \frac{\pi - 3}{3}$$

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# FORMULAS

FORMULA No.

**D034**

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$k \in N$

$$\sum_{k=1}^{k=\infty} \frac{64 \times k^4 - 64 \times k^3 + 124 \times k^2 + 56 \times k + 15}{(4 \times k - 3) \times (4 \times k^2 - 1) \times (16 \times k^2 - 1) \times [16 \times (k + 1)^2 - 1]} = \frac{\pi - 2}{16}$$

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# FORMULAS

FORMULA No.

**D035**

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$$\sum_{k=1}^{k=\infty} \frac{k^4 + 9 \times k^3 + 39 \times k^2 + 89 \times k + 81}{(k+2)^3 \times (k+3)^3} = \frac{2 \times \pi^2 - 15}{12} \quad k \in \mathbb{N}$$

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# FORMULAS

FORMULA No.

**D036**

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$$\sum_{k=1}^{k=\infty} \frac{1}{4 \times (2 \times k - 1)^2 - 2809} = \frac{\pi}{424} \quad k \in \mathbb{N}$$

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# FORMULAS

FORMULA No.

**D037**

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$$\sum_{k=1}^{k=\infty} \frac{16 \times k^2 + 32 \times k + 15}{(4 \times k - 3) \times (16 \times k^2 - 1) \times [16 \times (k + 1)^2 - 1]} = \frac{\pi - 2}{16} \quad k \in \mathbb{N}$$

**NEW MATHEMATICAL FORMULA DAILY**





We invite you every  
week and every day  
to our website  
[www.and-just-math.com](http://www.and-just-math.com)

Thanks for:  
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