

*In memory of Justynka, my wife*

# FORMULAS

FORMULA No.

W20

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



[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.

D201

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{p_{k+1}^4 \times p_{k+2}^4 + k \times (k+2) \times p_{k+2}^4 - (k+1)^2 \times p_{k+1}^4 - k}{(k+1) \times (k+2) \times p_{k+1}^4 \times p_{k+2}^4} = \frac{41}{81}$$

$p_k$  ( $k$ -th prime number)

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# FORMULAS

FORMULA No.

D202

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$$\sum_{k=1}^{k=\infty} \frac{p_{k+4} \times (k+2)^{1+p_{k+2}} - p_{k+3} \times (k+1)^{p_{k+1}}}{p_{k+3} \times p_{k+4} \times (k+1)^{p_{k+1}} \times (k+2)^{p_{k+2}} \times (k+2)!} = \frac{1}{112}$$

$k \in N$

$p_k$  ( $k$ -th prime number)

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# FORMULAS

FORMULA No.

**D203**

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(k+7) \times [(k+1) \times (k \times p_{k+5}^2 - 2 \times p_{k+4}^2) \times p_{k+6}^2 + p_{k+4}^2 \times p_{k+5}^2]}{p_{k+4}^2 \times p_{k+5}^2 \times p_{k+6}^2 \times (k+1)!} = \frac{505}{20449}$$

$p_k$  ( $k$ -th prime number)

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# FORMULAS

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FORMULA No.

D204

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$$\prod_{k=1}^{k=\infty} \left[ 1 - \frac{4 \times k + 3}{4 \times (k + 1) \times (3 \times 2^{2 \times k - 2} \times k! + 1)} \right] = \frac{3}{4} \quad k \in \mathbb{N}$$

$p_k$  ( $k$ -th prime number)

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# FORMULAS

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FORMULA No.

D205

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(k+1)^2 \times (48 \times k^2 + 96 \times k + 41)}{(4 \times k - 3) \times (4 \times k + 1) \times (4 \times k + 3) \times (4 \times k + 5) \times (4 \times k + 7) \times (4 \times k + 11)} = \frac{1155 \times \pi + 5248}{443520}$$

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# FORMULAS

FORMULA No.

**D206**

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(k-2) \times k \times [(k-1)! - 1] \times 2^{k-1} + (k-1) \times (k! - 2^k)}{k!^2} = 1$$

**NEW MATHEMATICAL FORMULA DAILY**

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# FORMULAS

FORMULA No.

**D207**

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$k \in N$

$$\sum_{k=1}^{k=\infty} \frac{k \times [3 \times (k + 1)!^2 - 3 \times (k + 2)! + k \times (k + 3) + 3]}{(k + 1)!^3} = 1$$

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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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Photo Gordon Johnson z Pixabay  
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