

*In memory of Justynka, my wife*

# FORMULAS

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

FORMULA No.

**W08**

[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

FORMULA No.

**D081**

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$k \in N$

$$\sum_{k=1}^{k=\infty} \frac{[(2 \times p_k^2 + 3 \times p_{k+2}^2) \times p_{k+1}^2 - 5 \times p_k^2 \times p_{k+2}^2] \times 2^{k+1}}{p_k^2 \times p_{k+1}^2 \times p_{k+2}^2 \times 3^{k-2}} = 5$$

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

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# FORMULAS

FORMULA No.

**D082**

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{3 \times (k+1) \times (k+3) \times p_{k+2} \times p_{k+6} - (k+2) \times p_{k+1} \times p_{k+5}}{p_{k+1} \times p_{k+2} \times p_{k+5} \times p_{k+6} \times (k+3)! \times 3^{k-2}} = \frac{1}{13}$$

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

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FORMULA No.

**D083**

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$k \in N$

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

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

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FORMULA No.

D084

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(p_{k+1} - p_k) \times [2 \times (p_k + p_{k+1}) \times p_k \times p_{k+1} + 7 \times p_k \times p_{k+1} + 2 \times (p_k^2 + p_{k+1}^2) + 5 \times (p_k + p_{k+1}) + 2]}{p_k \times (p_k + 2) \times p_{k+1} \times (p_{k+1} + 2) \times (2 \times p_k + 1) \times (2 \times p_{k+1} + 1)} = \frac{3}{40}$$

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

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FORMULA No.

**D085**

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

*p<sub>k</sub> (k-th prime number)*

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$$\sum_{k=1}^{k=\infty} \frac{3 \times (k+1) \times p_{k+8} \times p_{k+2}! - p_{k+7} \times p_{k+1}!}{p_{k+7} \times p_{k+8} \times 3^k \times (k+1)! \times p_{k+1}! \times p_{k+2}!} = \frac{1}{114}$$

$k \in N$

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

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$$\sum_{k=1}^{k=\infty} \frac{2^{k+4} \times [(k+2) \times p_{k+4}! - 2 \times p_{k+3}!]}{(k+2)! \times p_{k+3}! \times p_{k+4}!} = \frac{1}{315} \quad k \in \mathbb{N}$$

*p<sub>k</sub> (k-th prime number)*

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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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