

*In memory of Justynka, my wife*

# FORMULAS

FORMULA No.

**W08**

'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.

**D081**

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$$\prod_{k=1}^{k=\infty} \left[ 1 - \frac{7 \times k + 6}{7 \times (k + 1) \times (6 \times 7^{k-1} \times k! + 1)} \right] = \frac{6}{7} \quad k \in \mathbb{N}$$

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# FORMULAS

FORMULA No.

**D082**

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$$\prod_{k=1}^{k=\infty} \left\{ 1 - \frac{60 \times [(k+5) \times p_k - p_{k+1}]}{59 \times (k+5)! + 60 \times (k+5) \times p_k} \right\} = \frac{59}{60}$$

$k \in N$

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

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FORMULA No.

D083

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

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

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FORMULA No.

**D084**

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$k \in N$

$$\prod_{k=1}^{k=\infty} \left\{ 1 + \frac{15 \times (p_k \times p_{k+3} - p_{k+1} \times p_{k+2}) \times p_{k+2}}{[4 \times p_{k+1} \times p_{k+2} - 15 \times (p_k \times p_{k+2} + p_{k+1}^2)] \times p_{k+3}} \right\} = 1 \frac{11}{15}$$

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

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$k \in \mathbb{N}$

$$\sum_{k=1}^{k=\infty} \frac{(p_{k+2} + k - 1) \times (9 \times p_{k+3} - 10 \times p_{k+2} + p_{k+1} + 8)}{(p_{k+2} - p_{k+1} + 1) \times (p_{k+3} - p_{k+2} + 1) \times 3^{2 \times k - 1}} = 5 \frac{3}{8}$$

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

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$$\prod_{k=1}^{k=\infty} \left\{ 1 - \frac{9 \times (p_{k+2}^{k+2} - p_{k+1}^{k+1})}{(8 \times p_{k+1}^{k+1} + 9) \times p_{k+2}^{k+2}} \right\} = \frac{8}{9} \quad k \in N$$

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

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$$\sum_{k=1}^{k=\infty} \frac{[(k+1) \times p_{k+4}^2 - 7 \times p_{k+3}^2] \times 7^{k+1}}{p_{k+3}^2 \times p_{k+4}^2 \times (k+1)!} = 1 \quad k \in N$$

*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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