

# **FORMULAS**

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

FORMULA No.

W15

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



# **FORMULAS**

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

Euclid

FORMULA No.

D151

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$$k \in N$$

$$\sum_{k=1}^{k=\infty} \frac{(2 \times p_k + 3) \times p_{k+1} \times k + 4 \times p_k \times p_{k+1} + 6 \times p_{k+1} - 3 \times p_k}{p_k \times p_{k+1} \times (k+2)!} = 2 \times e - 3\frac{1}{4}$$

 $p_k$  (k-th prime number)



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FORMULA No.

D152

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$$k \in N$$

$$\sum_{k=1}^{k=\infty} \frac{(k+2) \times p_{k+2}^{1+p_{k+2}} - p_{k+1}^{1+p_{k+1}}}{p_{k+1}^{1+p_{k+1}} \times p_{k+2}^{1+p_{k+2}} \times (k+2)!} = \frac{1}{162}$$

 $p_k$  (k-th prime number)



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D153

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$$k \in N$$

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

 $p_k$  (k-th prime number)



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FORMULA No.

D154

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$$k \in N$$

$$\sum_{k=1}^{k=\infty} \frac{(p_{k+1}-p_k) \times [2 \times p_k \times p_{k+1} + 2 \times (p_k^2 + p_{k+1}^2) + p_k + p_{k+1} - 1]}{p_k \times (p_k+1) \times (2 \times p_k - 1) \times p_{k+1} \times (p_{k+1}+1) \times (2 \times p_{k+1} - 1)} = \frac{1}{18}$$

 $p_k$  (k-th prime number)



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D155

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$$k \in N$$

$$\sum_{k=1}^{k=\infty} \frac{2 \times p_k \times p_{k+1} - (k-3) \times p_{k+1} + (k+6) \times p_k + 10}{(k+1) \times (k+2) \times (2 \times p_k + 5) \times (2 \times p_{k+1} + 5)} = \frac{2}{9}$$

 $p_k$  (k-th prime number)



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D156

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$$k \in N$$

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

 $p_k$  (k-th prime number)



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$$k \in N$$

$$\sum_{k=1}^{k=\infty} \frac{(p_k+1) \times p_{k+1} \times (p_{k+2}-p_{k+1}) \times (p_{k+3}+1) - p_k \times (p_{k+1}+1) \times (p_{k+3}-p_{k+2})}{p_k \times p_{k+1} \times (p_{k+1}+1) \times (p_{k+2}+1) \times (p_{k+3}+1)} = \frac{7}{24}$$

 $p_k$  (k-th prime number)

