

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

FORMULA No.

W11

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



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

FORMULA No.

D111

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

$$\sum_{k=1}^{k=n} \frac{3 \times k^2 + 5 \times k + 3}{k^6 + 5 \times k^5 + 11 \times k^4 + 13 \times k^3 + 9 \times k^2 + 3 \times k}$$

$$= \frac{n^3 + 4 \times n^2 + 6 \times n}{3 \times n^3 + 12 \times n^2 + 18 \times n + 9}$$



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

FORMULA No.

D112

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

$$\sum_{k=1}^{k=n} \frac{k \times \ln \frac{k+2}{k+1} + \ln \frac{k+2}{k+1} + \ln \frac{1}{k+1}}{\ln (k+1) \times \ln (k+2)}$$

$$= \frac{2 \times \ln (n+2) - n \times \ln 2 - 2 \times \ln 2}{\ln 2 \times \ln (n+2)}$$



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

Euclid

Output

D113

FORMULA No.

www.and-iust-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**

$$\sum_{k=1}^{k=n} \frac{k \times \ln \frac{k+1}{k+2} + \ln \frac{k+1}{k+2} + \ln (k+1)}{(k+1) \times (k+2)}$$

$$= \frac{1}{2} \times \ln 2 - \frac{\ln (n+2)}{(n+2)}$$



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

FORMULA No.

D114

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

$$k, n \in N$$

$$\sum_{k=1}^{k=n} \frac{k \times \ln \frac{k+1}{k+2} + \ln(k+1)}{k \times (k+1)} = \ln 2 - \frac{\ln(n+2)}{n+1}$$



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

FORMULA No.

D115

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

$$\sum_{k=1}^{k=n} \frac{2 \times k \times \ln \frac{k+2}{k+1} - \ln \frac{k+2}{k+1} + 2 \times \ln \frac{1}{k+1}}{\ln(k+1) \times \ln(k+2)} = \frac{\ln(n+2) - 2 \times n \times \ln 2 - \ln 2}{\ln 2 \times \ln(n+2)}$$



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

FORMULA No.

D116

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

$$\sum_{k=1}^{k=n} \frac{3 \times k \times ln \frac{k+2}{k+1} + 2 \times ln \frac{k+2}{k+1} + 3 \times ln \frac{1}{k+1}}{ln(k+1) \times ln(k+2)}$$

$$= \frac{5 \times ln(n+2) - 3 \times n \times ln2 - 5 \times ln2}{ln2 \times ln(n+2)}$$



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

FORMULA No.

D117

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

$$\sum_{k=1}^{k=n} \frac{3 \times k \times \ln \frac{k+1}{k+2} + 2 \times \ln \frac{k+1}{k+2} + 3 \times \ln (k+1)}{(3 \times k + 2) \times (3 \times k + 5)}$$

$$= \frac{-5 \times \ln (n+2) + 3 \times n \times \ln 2 + 5 \times \ln 2}{5 \times (3 \times n + 5)}$$

