



FORMULA No.

D361

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

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

$$\sum_{k=1}^{k=\infty} sin\left(\frac{\pi}{2^{2\times k-1}}\right) \times sin\left(\frac{3\times \pi}{5\times 2^{2\times k-1}}\right) = \frac{5+\sqrt{5}}{8}$$



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$$\sum_{k=1}^{k=\infty} \operatorname{arc} tg\left(\frac{2^{k-1}}{(2^{k-1}-1)\times(2^k-1)+2^{2\times k-1}}\right) = \frac{\pi}{4}$$



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$$\sum_{k=1}^{k=\infty} \frac{2 \times k - 1}{(4 \times k^2 - 8 \times k + 5) \times (4 \times k^2 + 1)} = \frac{1}{4}$$



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 $k \in N$

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$$\sum_{k=1}^{k=\infty} \operatorname{arc} \operatorname{ctg} \left(2 \times \left(3 - \sqrt{5}\right) \times k^2 - 2 \times \left(3 - \sqrt{5} - \frac{\sqrt{25 + 10 \times \sqrt{5}}}{5}\right) \times k - \sqrt{5 - 2 \times \sqrt{5}} + 1 - \frac{2}{5} \times \sqrt{25 - 10 \times \sqrt{5}} + \frac{2}{5} \times \sqrt{5} \right) = \frac{\pi}{5}$$



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$$k \in N$$
$$\sum_{k=1}^{k=\infty} \frac{k \times \sqrt{2 \times k^2 + 4 \times k + 3} - (k+1) \times \sqrt{2 \times k^2 + 1} + 1}{k \times (k+1)} = 1 + \sqrt{2} - \sqrt{3}$$



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$$\sum_{k=1}^{k=\infty} \operatorname{arc} tg\left(\frac{k \times (k+1)!}{(k+1) \times (k!-1) \times [(k+1)!-1] + ((k+1)!)^2}\right) = \frac{\pi}{4}$$



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$$k \in N$$
$$\prod_{k=1}^{k=\infty} \cos \frac{\pi}{3 \times 2^{k+3}} = \frac{3 \times (\sqrt{2} + \sqrt{6} - 2) \times \sqrt{8 + 2 \times \sqrt{6} - 4 \times \sqrt{2} - 4 \times \sqrt{3}}}{\pi}$$

We invite you every week and every day to our website www.and-just-math.com

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