



FORMULA No.

D361

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

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

$$\sum_{k=1}^{k=\infty} \operatorname{arctg} \frac{2^{k-1} \times (\sqrt{2}+1)}{(\sqrt{2}+1)^2 + 2^{2 \times k-1}} = \frac{3 \times \pi}{8}$$



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$$\sum_{k=1}^{k=\infty} (-1)^{k-1} \times \frac{\sin\left(\frac{3\times\pi}{5\times2^k}\right)}{\cos\left(\frac{\pi}{5\times2^{k-1}}\right)\times\cos\left(\frac{\pi}{5\times2^k}\right)} = \sqrt{5-2\times\sqrt{5}}$$



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$$\sum_{k=1}^{k=\infty} sin\left(\frac{\pi}{5\times 2^{k+1}}\right) \times cos\left(\frac{3\times\pi}{5\times 2^{k+1}}\right) = \frac{\sqrt{10-2\times\sqrt{5}}}{8}$$



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$$\sum_{k=1}^{k=\infty} \arcsin\left(\frac{\left(\sqrt{6}+\sqrt{2}\right) \times \left(\sqrt{2^{2\times k+2}} - 2 - \sqrt{3}} - \sqrt{2^{2\times k}} - 2 - \sqrt{3}\right)}{2^{2\times k+2}}\right)$$
$$= \frac{5 \times \pi}{12}$$



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



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



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$$\sum_{k=1}^{k=\infty} \operatorname{arctg} \frac{2^{k-1} \times (2+\sqrt{3})}{(2+\sqrt{3})^2 + 2^{2 \times k-1}} = \frac{5 \times \pi}{12}$$

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

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