

Attn: Security

From: Chris Jeuell

Subject:

# Game of Numbers

$$\sqrt[3]{\frac{2^{2014} \cdot 4^{2014}}{2^{6030}}}$$

$$\gcd\left(\binom{9}{4}, \binom{12}{5}\right)$$

$$\int_0^2 x^3 + 4x + \frac{3\pi}{4} \cos \frac{\pi x}{4} dx$$

the real root of  $x^3 + 6x - 20$

$$100! - (99 \cdot 99! + 98 \cdot 98! + 97 \cdot 97! + \dots + 3 \cdot 3! + 2 \cdot 2! + 1 \cdot 1!)$$

the positive value of  $k$  such that the minimum value of the function  $f(x) = x^2 + kx - 1$  is  $-2$

the value of  $n$  that satisfies  $3! \cdot 5! \cdot 7! = (n + 1)!$

the value of  $n$  such that the sum of the first  $n$  positive squares is 650

$$\left. \frac{d}{dx} 81 \ln x \right|_{x=9}$$

the value of  $x$  that satisfies  $\log_5(x - 7) = \log_{25}(x^2 - 12x + 9)$

$$\sqrt{37^2 - 12^2} - \sqrt[3]{1^3 + 12^3 - 9^3}$$

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