Extra Problems. III.

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Pentagon

Can the intersection of a rectangular parallelepiped with a plane be an equilateral pentagon?

Equation

Solve the equation $x^{(x^n)} = n$.

Moscow Olympiad. 2011.

What's larger: $2011^{2011} + 2009^{2009}$ or $2011^{2009} + 2009^{2011}$?