

The 7th East Asia Number Theory Conference

Multiplicative functions, additive on polygonal numbers

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Spiro showed that multiplicative function which is additive on prime numbers should be the identity function. After Spiro's work, there are many variations. One of such result is work of Chung and Phong; multiplicative function which is additive on triangular numbers should be the identity. But there is non-identity functions which is multiplicative and is additive on square numbers. In this talk, we check the difference of triangular and square numbers and expand it the other polygonal numbers, pentagonal and hexagonal numbers.

