دعم نشر أبحاث :

<u>كلية العلوم</u>

الدكتور أمين وتنو والباحث المشارك السيد فراس عوض

(A Note of the generalization of elite primes)

الذي نُشر في مجلة :

(JP Journal of Algebra Number Theory and Application)

Volume 15, Issue 1, Pages 53 - 63 (October 2009)

<u>ملخص البحث:</u>

Elite primes are prime numbers, modulo which all but finitely many Fermat numbers, $F_n = 2^{2^n} + 1,$ are quadratic nonresidues. This definition has been extended using the generalized Fermat numbers $F_{b,n} = b^{2^n} + 1,$ and the associated primes are called b-elite primes. We consider, as an alternate generalization, the b-elite primes with respect to the sequence $F_{b,n}/2,$ where b is odd. We present some arguments for this modification and make necessary adjustments to the classification results when the period length is one or two. Furthermore, we search for elite and anti-elite primes to the base $b = 3,$ up to 2.68 billion.

الدكتور أمين وتنو

(Solution to Two open Questions on Super Niven Numbers)

الذي نُشر في مجلة :

(Global Journal of Pure and Applied Mathematics)

ISSN 0973 – 1768 Volume 6 Number 2 (2010), PP.227-230

<u>ملخص البحث:</u>

A natural number is called super Niven when it is divisible by all its sub digital sums. We identify all powers of 2 which are super Niven and prove that there are infinitely many pseudo – super Niven numbers.

الدكتور أمين وتنو

(Another Simple Construction of Smith Numbers)

الذي نُشر في مجلة :

(Missouri Journal of Mathematical Sciences)

Volume 22, Issue 2 (2010), 97-101.

<u>ملخص البحث:</u>

We find that for any prime P > 5 with digital sum equals 5, the number 21P is Smith, and so is 112P.

الدكتورة منال شوكت

(Further Results on the Diameter of Zero –Divisor Graphs of Some Special Idealizations)

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الذي نُشر في مجلة :

(International Journal of Algebra)

Let R be a ring with unity and Let M be an R – Module. Let R (+) M be the idealization of the ring R the R – module M. In this paper, we give new result in the diameter of Ѓ (Z [a] (+) Z $_n$) and Ѓ(Z [a] (+) Z $_m$)

Mathematics Subject Classification: 13A99, 13A15.

Keywords: Zero – divisor graphs, Idealization rings.

الإنتاج العلمي المدعوم لعام 2011/2010

دعم نشر أبحاث :

الدكتورة رائدة وجيه خليل

(Assessment of the preserving Efficacy of the pharmaceutical Syrups to Identified Air- Borne Microorganisms)

الذي نُشر في مجلة :

(Trends in Applied Sciences Research)

ملخص البحث:

The purpose of the current study was a continuation of the evaluation of the efficacy of different preservatives ingredients of different cough syrups and which previously assessed to Air-borne microorganisms. The airborne microorganisms were characterized firstly according to their colony color and then to their DNA sequences. The identified microorganisms were inoculated into syrup A (glycerol and propylene glycol), syrup B (propylene glycol and glycerin), syrup (C) (glycerin, propylene glycol and butyl paraben), syrup D (methyl paraben and propyl paraben) and normal saline as a control which were then incubated for 24 h. Growth of microorganisms into syrup was compared by counting the CFUs from a subculture of inoculated syrup at different time. The data showed that the genome of the three isolated air-borne microbes revealed three different species and that all the combinations of the preservatives in the four studied cough syrups behaved similarly in term of efficacy towards the **microbial contamination**. The results revealed that the preservatives mixtures of propylene glycol with glycerol or with glycerin or with butyl paraben preservatives and the methyl paraben with propyl paraben are have efficient **antimicrobial activity** against Airborne microbes during the 24 h studied period.