

University of Lethbridge
Department of Mathematics
and Computer Science

Number Theory & Combinatorics Seminar

Monday — March 25, 2013

Room: B660

Time: 12:00 to 12:50 p.m.

Amir Akbary
(University of Lethbridge)

Sets of Multiples

Abstract: For a subset S of natural numbers we consider its set of multiples $M(S)$. So

$$M(S) = \{ms; m \in \mathbb{N}, s \in S\}.$$

In many cases we can see that $M(S)$ has an asymptotic density $\delta(M(S))$. For example if $S = \{2, 3\}$ then $\delta(M(S)) = 2/3$.

Question Is it true that $\delta(M(S))$ exists for any $S \subseteq \mathbb{N}$?

The following conjecture was formulated around 1930's.

Conjecture $\delta(M(S))$ exists for any $S \subseteq \mathbb{N}$.

By 1934 the answer to the above question was known. In this talk we study this question.

EVERYONE IS WELCOME!

Visit the seminar web page at
<http://www.cs.uleth.ca/~nathanng/ntcoseminar/>