

MATH CHALLENGE

of the ECU Math Club

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MC4

A small country has only two coin denominations, 5¢ coins and 7¢ coins. They are proud of the fact that every value greater than 23 can be written as a nonnegative linear combination of these two coin values. For example,

$$29¢ = 2(7¢) + 3(5¢).$$

Prove that every value greater than 23 can be written as a nonnegative linear combination of these two coin values.

Submissions due: 12:00pm, May 3, 2019

Submit solutions to Dr. Sit as hard copy to Wallace 410 or as email to Atilla.Sit@eku.edu (PDF only).

Solutions must include all supporting work.

Top solvers will be recognized.