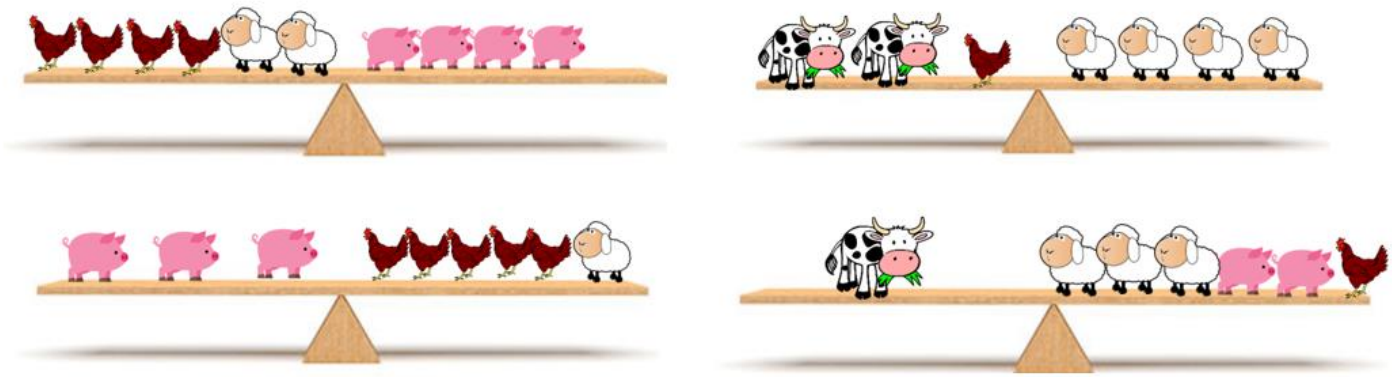
Oct 2018

Department of Mathematics

PROBLEM SOLVING CHALLENGE

Q1. *Junior Cycle*

The prizes for winning an arcade game are stuffed animal toys. Each stuffed animal requires you to hand in a certain amount of prize tokens. To win two pigs you must have twenty-four prize tokens. By using the scales below, determine how many tokens you would need to win each stuffed animal toy.



Q2. *Senior Cycle*

$$2x + y, \quad 5x - 2y, \quad 8x - 5y, \quad 11x - 8y$$

(i) Prove the following sequence is linear for all $x, y \in R$

(ii) The above sequence produces the pattern $21, 39, 57, 75$ for a certain x and y value. Find both these values.

Answers on an A4 sheet with your Name, Year and Class should be given to Mr. McManus or to Mr. McEvoy in room 33 before 4pm on Friday 26th of October.

*Monthly Prize for both Junior and Senior Cycle.**

Good Luck.

Junior Cycle students answer question 1 only. *Senior Cycle students answer question 2 only*