

Activity from:

Bolt, B. (1985). *More mathematical activities*. Cambridge, GB: Cambridge University Press.

Mathematics Teaching Institute, July 27-31 2015

### **How many will you take? (Game of NIM)**

- Introduce yourself to your partner – share one unique thing about yourself to your partner
- Rules of the game
  - This is a two player game.
  - For each turn, a player is allowed to remove one, two, or three objects from the pile.
  - The player who removes the last object loses the game.
  - Find your next opponent and repeat this pattern until we finish.

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- Please share your strategies with us.
- What strategy or strategies, if any, will always guarantee a win?
- How might your strategy change if each opponent was allowed to remove 1, 2, 3, or 4 objects?
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