MathsJam Shout

December 2024
MathsJam UK Gathering

The MathsJam UK Gathering ('Big MathsJam') takes place every November in the UK. This month's Shout is inspired by talks given at this year's Gathering. For info and updates about future events, visit **mathsjam.com/gathering/uk**.

Play (Finite or not!) Mancala

Jonathan Welton talked about generalising the game of Mancala to the infinite case. Play the (finite) game using counters/stones and the board below drawn on a page, or there's an online version here to play against a computer: **bit.ly/online-mancala**
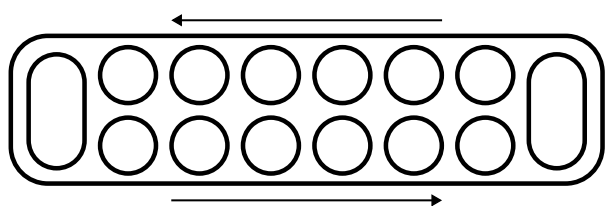
Mancala rules: bit.ly/mancala-rules

If you start with an infinitely long board consisting of a single row of spaces, with one stone in each space, pick a start point and alternate moving left and right, what will happen to the pattern of stones?

Make SET Square

Bruce and Hamish from Edinburgh MathsJam challenged us to use the cards of a standard SET deck to make a 3-by-3 square of cards in which every row, column and diagonal (and some other combinations too!) form a SET under the rules of the game.

With all 81 cards, can you make a SET Square of SET Squares (a 3-by-3 grid of valid SET squares, so that the top left cards in each set also form a valid SET Square, and so on)?

Another SET challenge: hide one card. Can you guess which card it was by the end of a normal game of SET?

SET on Maths Gear: bit.ly/set-buy
A useful PDF: bit.ly/set-printable
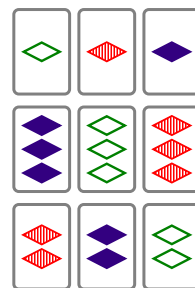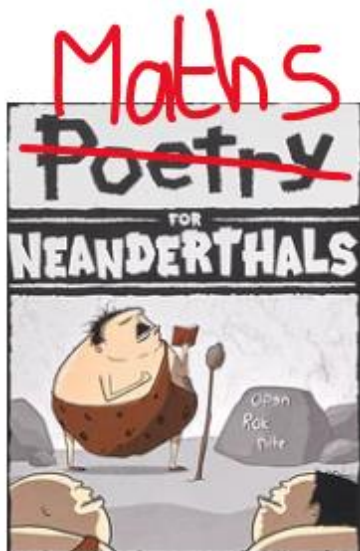
Play Maths for Neanderthals

Sam Hartburn brought along a fun twist on 'describe a thing for people to guess' games – can you describe mathematical concepts using only one-syllable words?

Printable game: bit.ly/maths-neander

Puzzle Dice Digits

James Grime posed a puzzler: You are forced to choose a number. You must then roll seven dice and rearrange them to make a 7-digit number. If the number is divisible by your chosen number, you win. What is the best number to choose? (Hint: the best choice is not 2.)

It's good to be a Mathematician.

It's good to be a Neandethal.

What isn't good is being both of those things at the same time.

The trouble for you is that as a Neanderthal, you don't know any words that are more than one syllable.

The trouble for your team is that they're listening to a Neanderthal explain mathematics.

Setup

Print and cut out the Maths cards (each file contains a different set of cards).

Card set 1   Card set 2   Card set 3   Card set 4

Form two teams, Team X and Team Y.

Team X goes first and picks a player to be the first Neanderthal Mathematician.

Gameplay

If you are the Mathematician, the opposing team starts a one-minute timer while you take the first Maths card. Begin trying to get your team to say either the 1-point word/phrase (trivial) or the 3-point word/phrase (nontrivial) using **only words with one syllable**.

Everyone on your team can shout out words at the same time when trying to guess the word or phrase. When someone is correct, say "YES!" and put the card in the appropriate pile – either 1 point or 3 points.

Starting with the 1-point word/phrase: If you start with the 1-point word/phrase and get it correctly shout 'YES!' and then you can either stop there and earn 1 point or try for the 3-point word/phrase. However, if along the way you accidentally break any rules, you lose the earned point and must put the card on the discard pile.

Starting with the 3-point word/phrase: If you start with the 3-point word/phrase and your team says the 1-point word shout 'YES!' and follow the rules above as if you had started with the 1-point word/phrase.

Skipping: If you want to skip a card before earning any points, you can say 'Skip!' and put the card on the discard pile.

In all cases, draw a new Maths Card to continue playing until the timer runs out.

NOTE: You can never earn more than 3 points from a card.

Rules

- **You can** only speak using words with one syllable.
- **You can** say any word on your card **AFTER** a guesser has said that word.
- **You can't** say any word, part of any word, or any form of a word that is on the Maths Card (unless someone on your team has already said it out loud).
- **You can't** use gestures/charades.
- **You can't** use 'sounds like' or 'rhymes with'.

Ending your turn

Each Mathematician's turn continues until the times runs out. If you've earned any points for the Maths Card in your hand, put the card in the appropriate pile. It is now the other team's turn.

Winning

When all players have had one turn as Mathematician (or both teams have had the same number of turns as Mathematician) add up the points in each team's piles. The team with the most points wins the game.

Concept and rules shamelessly stolen and adapted by Sam Hartburn from the game Poetry for Neanderthals.