History of wildly popular card game "Spot It!"

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The card game "Spot It!" has become one of the most popular family games but the secret to how the game works has its roots in the logic puzzles of 19th-century mathematicians. Photo by: Blue Orange Games

"Spot It!" is a very popular game. It is on Amazon's top-10 list of best-selling card games. The game now ranks up there with "Uno" and "Taboo."

More than 12 million "Spot It!" games have sold since its 2009 release, with more than 500,000 selling each year in the United States. It's often used in classrooms, and appears on lists of educational games that challenge the mind. It's the kind of game that makes you feel like you're doing something good for your brain.

The game has a deck of 55 cards, with eight images on each card. There are a total of 57 images that could appear. If you choose any two cards at random, one image always matches. The game hinges on the speed of spotting the match — two blocks of cheese, two dolphins and so on.

How is it possible that every single card matches another card in just one way?

It's not magic. It's math.

Mathematical Revival

The story of "Spot It!" which was created as "Dobble" in Europe starts in 1850 Britain. At the time, Britain was experiencing a mathematical revival, as the reign of Queen Victoria seemed to produce math "rock stars." They laid down the mathematical building blocks of modern-day digital technology. Without these guys, modern computing couldn't exist.

The Reverend Thomas Kirkman was not a mathematical rock star but led a church in England for 52 years. He was curious, though. And after his death in 1895, his son wrote that one of his father's main interests was math.

The math behind "Spot It!" comes from a word problem Kirkman created called the "Schoolgirl Problem."

Kirkman asks people to solve the following puzzle:

For seven straight days, 15 schoolgirls walk out of school in five rows of three girls each. How could you plan them leaving school so two girls never leave next to each other more than once?

Kirkman was interested in triplets, or sets of three. He wanted to see how many different triplets a group could have before pairs start repeating.

More recently, Jacques Cottereau was also interested in this problem. The young man from France was not a mathematician either, but in 1976 he figured out every possible way to solve the schoolgirl problem.

Next, he made a game of it. Instead of schoolgirls, Cottereau designed a "game of insects." Each of the 31 cards he made had six insects. Any pair only shared one image. The game was a limited version of what "Spot It!" would become. However, it sat in Cottereau's living room gathering dust for 30 years.

The co-inventor of "Dobble," Denis Blanchot, came across a few of Cotterau's "game of insects" cards in 2008. Blanchot, a relative of Cottereau, is a journalist and enjoys designing games.

A Game Of Speed And Fun

"I turned it into a true game, speed and fun," Blanchot says. He and Cotterau soon pictured the game being for all ages.

They called the game "Dobble" after the word "double." It launched first in France in 2009.

"Dobble" was released in the United Kingdom and North America as "Spot It!" in 2011. The game saw fairly immediate success. Last year, it was the most popular card game in the United Kingdom.

More Than 100 Versions

Now, the game has been made into more than 100 versions. The versions include the National Hockey League, "Star Wars," Pixar's "Finding Dory" and Spanish and French words.

Most people who play do not understand exactly why it works. "Spot It!" may be easy to play, but the math behind it is surprisingly complicated.

Kirkman's problem and therefore the solution to "Spot It!" lives in the area of finite geometry. Most simply, the game and solution to the "Schoolgirl Problem" is based on a math fact.

The fact dates back to ancient Greece. It says two lines on an endless, flat surface will only cross at one point.

Of course, you do not need to understand how it works to enjoy playing the game. However, figuring it out could be a gateway to understanding or thinking about math in new ways.

Quiz

1 Why did Reverend Thomas Kirkman create the "Schoolgirl Problem," which would later become the inspiration for the "Spot It!" game? How do you know?

  (A) Kirkman was planning on becoming a mathematician; The Reverend Thomas Kirkman was not a mathematical rock star but led a church in England for 52 years. He was curious, though.

  (B) Kirkman wanted to create a card game that everyone would like; The math behind "Spot It!" comes from a word problem Kirkman created called the "Schoolgirl Problem."

  (C) Kirkman thought a problem about schoolgirls was more interesting than insects; For seven straight days, 15 schoolgirls walk out of school in five rows of three girls each. How could you plan them leaving school so two girls never leave next to each other more than once?

  (D) Kirkman liked working with the mathematical idea of triplets; Kirkman was interested in triplets, or sets of three. He wanted to see how many different triplets a group could have before pairs start repeating.

2 Read the paragraph from the section "A Game Of Speed And Fun."

  "Dobble" was released in the United Kingdom and North America as "Spot It!" in 2011. The game saw fairly immediate success. Last year, it was the most popular card game in the United Kingdom.

  Which of the following is an accurate explanation of what this paragraph means?

  (A) "Dobble" did not sell many games in North America and the United Kingdom but "Spot It!" did much better.

  (B) "Dobble" has been renamed "Spot It!" in some countries and it has done particularly well in the United Kingdom.

  (C) "Dobble" is a more interesting version of "Spot It!" which is only found in North America and the United Kingdom.

  (D) "Dobble" no longer exists in most countries since it has been replaced by the new card game "Spot It!"

3 If this article were organized using a problem-and-solution structure, which section would come FIRST?

  (A) Introduction [paragraphs 1-5]

  (B) "Mathematical Revival"

  (C) "A Game Of Speed And Fun"

  (D) "More Than 100 Versions"

4 Read the introduction [paragraphs 1-5] and the final section, "More Than 100 Versions."

  What is one connection between these two sections?

  (A) Both sections explain the rules of "Spot It!" and provide mathematical strategies that will help a player win.

  (B) Both sections highlight the popularity of "Spot It" and focus on how the game eventually gained worldwide popularity.

  (C) The introduction mentions that there is math involved in the creation of "Spot It!" while the final section elaborates on some of the math behind "Spot It!"

  (D) The introduction shows who originally created the game "Spot It! while the final section describes the different versions of "Spot It" that are now sold.