Thought Protocol Games Presents...

radx.io®

the codable math game

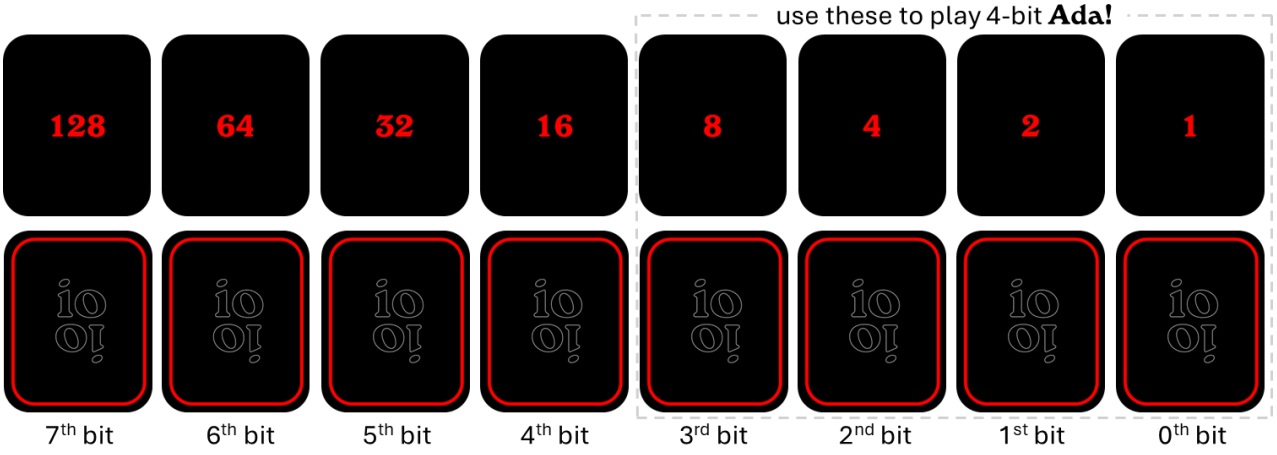
Featuring **Ada!**: A fast-paced number coding game for players age 10+

What's inside?

- **128 Code Cards** – Coded in decimal, hexadecimal, octal, and ASCII
- **10 Wildcards** – Adding chance to the game
- **4 Player Decks** – 4 color suits each containing 8 on/off "bits" (dots) and corresponding "ciphers" to convert between the bit code and decimal. (16 cards per player.)

Featured game: Ada! "Race to convert decimal numbers into bit code sequences"

- From the **Player Deck** choose your playing bit length: 4 cards (easiest) to 8 cards (hardest).
- Use matching **Code Cards**, e.g. 4 bits = cards 0 – 15 (cards with the blue borders); 5 bits = cards 0 – 31 (blue and red borders); 6 bits = 0 – 63 (blue, red, and yellow borders); 7 and 8 bits = all cards.
- Place all bit cards face down and line up your numbered cipher cards above the bit cards *right-to-left* in ascending order. Build your cipher corresponding to the number of bits you are using.
- All bits start "off" – back face up. A sample layout of a **Player Deck** is shown below.



Play:

- Shuffle the **Code Cards** thoroughly and place face down in a pile. Add **Wildcards** as desired throughout the pile.
- Each player draws a card from the pile. The highest number draw goes first.
- Player 1 draws a pile card, calls out the decimal number and lays it face up on the table. The decimals are the blue numbers on white backgrounds.
- All players race to build the bit code by flipping on their bits (blank = "off", dot = "on").
- The first player to correctly convert the decimal number to the bit code calls out "**Ada!**" and wins the round, keeping the solved **Code Card** in their own score pile.
- If correct, the winner draws the next card. If incorrect, that player discards and draws a new card for the remaining players to solve. (Player can call out new number but can't finish out that round.)

- Make sure to place all bits back to “off” position before starting the next round.
- In the event of a tie, players draw cards from the top of the deck. High card breaks the tie.
- You cannot call out “**Ada!**” before flipping the bits to the sequence you think is correct.

Win:

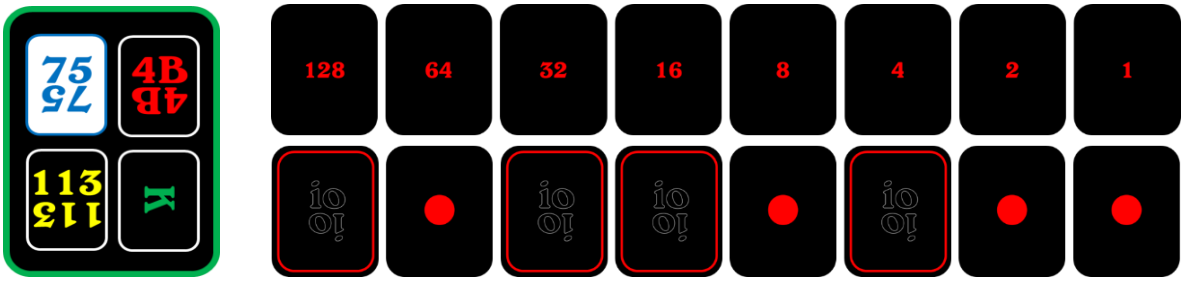
- The first player to collect **Code Cards** equal to the number of bits used during gameplay wins (e.g. 5-bit **Ada!** = first player to score 5 cards wins)

Wildcards:

- The ↑↓ wildcard is a “swap” – the player who draws that card must swap their score pile with another player’s score pile, even if no one else has cards. Put back into deck if no one has cards.
- The **§** wildcard is a “steal” – the player who draws that card steals *one* card from one opponent’s score pile. If no one has any scored cards, the player can save the card for future use.
- The **Ø** wildcard is a “reset” – the player must forfeit their entire score pile. Discard them off to the side or to the bottom of the **Code Card** pile.
- The **+1** wildcard is a “free card” – the player may keep the +1 and consider it to be a solved card.
- The **io** wildcard is an “add two” – the player who draws that card must then draw **2 Code Cards** and add those 2 values together for everyone to solve. This makes it possible to use the 8th bit during a full 8-bit **Ada!** game. When using less than 7 bits, the wildcard may become a “house rules” wildcard.
- Wildcards may be discarded or placed back into the deck after use, if desired. (Another “house rules.”)

Example draw and solve:

Say a player draws the number 75. (Remember, the white background blue numbers are the decimal numbers). In bit code, 75 = off-on-off-off-on-off-on-on (or 01001011 in base-2 binary). By turning on a bit, you are activating that number, so 0+64+0+0+8+0+2+1 = 75. The solve sequence is shown below.



Share your variations of radxio the codable math game! (pronounced radix eye-oh)

The number of games you can create using the bits and **Code Cards** is virtually endless, especially when you try using the hexadecimal, octal, and ASCII values. Can you come up with a game worth sharing? If so, email us at games@thoughtprotocol.com and we’ll consider sharing it with others to try! (Restrictions and conditions apply.)

Want to Go Genius Mode?

Level up with custom dice or tile variants of the game for a truly genius-level experience. Go to http://www.thoughtprotocol.com/games to learn more!

Fun fact: **Ada!** is named after Ada Lovelace. She is often considered the first computer programmer.