

The Second Number

A cooperative game about the hidden cost in every deal: the payday loan, the rent-to-own couch, the “free” first month. Students work as one block against the Machine, read the fine print together, and learn to spot the second number before they sign.

Ages 12+ · **Players** 2–5 per table · **Time** one 50-minute period · **Needs** one device per table (laptop, tablet or Chromebook), or the free print-and-play kit · **Cost** free, no accounts

Learning goals

By the end of the period, students can:

1. **Find the total cost** of an offer from its fee and its term, and turn a flat fee into a yearly rate (APR).
2. **Name the three places a trap hides:** the cost (red), the terms and the clock (amber), and who profits behind it (blue).
3. **Spot pressure:** a deadline that is fake (“Approved!”, “Move in today”) is part of the sale, not a reason to sign.
4. **Tell a trap from real help**, and name the honest options: a credit-union loan, free tax prep (VITA), federal student aid, a community college with guaranteed transfer.
5. **Explain why it takes a community:** the block only wins when everyone can read, not one strong reader.

Fits the *Managing Credit and Spending* areas of the National Standards for Personal Financial Education, and works in math (rates, percents, totals), economics, and civics.

Before class (10 minutes, once)

- Open the site on a school device and play a few turns of **Learn to play**. It runs in the browser; nothing to install.
- Groups of 3 are best (2–5 work). One device per group, passed around the table. *Play on everyone's phones* is optional; some school networks block it, and one device always works.
- No devices? Print the [print-and-play kit](#) (the cards, board and rules on paper).
- Built for every student: keyboard-only play, screen-reader support, **Plain cards** for anyone the red lens doesn't work for, color-blind-safe districts, and 🔇 to mute.

The 50-minute plan

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| 0–5 | Warm-up: one deal. Open Endless deals on the projector and read one offer aloud. Ask: “What does this really cost?” Take three guesses, then reveal the second number. |
| 5–8 | Set the tables. Each group chooses Learn to play : a 30-second comic, then the Coach explains each rule as it comes up. Groups that aren't three choose Play now → Block Party with Coach me as we play on. |
| 8–33 | Play the Block Party (3 districts: Lending, Housing, Education; 8 rounds; about 25 minutes). The block wins by waking 2 districts before the Machine captures 2. Walk the room. Listen for students reading the cost aloud to each other: that is the lesson working. |
| 33–38 | The dollar count. Win or lose, the end screen turns the game into real money: what the table signed, what it walked away from, what it stayed out of. Each table opens Send this game to your teacher and copies its result code to you (a chat, a form, or the board). |
| 38–50 | Debrief. Paste the codes into the Teacher's view on your device. It adds up the class, shows the deals that fooled the most tables, and opens a <i>Talk it through</i> for the top one. Use the questions on the next page. |

Exit ticket / homework: bring one real offer from home (a phone plan, a store card, a rent-to-own receipt) and work out its second number on the **Read your own deal** page. Nothing typed there leaves the device.

How the game teaches it

Every deal has a front, the pitch everyone sees, and three hidden layers. Students unlock them by building **Read**, and drag Grandma's red reading glasses over the card to see them.

Red: the cost. "Quick Cash: \$375 today, one flat fee of \$56.25." Under the glasses: that fee is a 391% APR.

Amber: the clock. Due in full in 14 days; can't pay, and you roll it over and owe the fee again. Sign-now deals run a countdown on screen. **The deadline is always fake:** when it runs out, nothing happens.

Blue: the connection. The storefront and the debt buyer that hounds you later share one owner. Every trap is part of one Machine.

The shortcut. Signing a trap fixes a problem now and leaves a mark on you (**Shady**). Students feel why people sign: it works, for a while.

Teaching. A player can teach another to read a district (call and response: read the second number aloud, have them say it back). The block can't win on one reader.

Questions for after the game

1. **What would you have to know to see this coming?** Pick the deal that fooled your table. What one fact would have changed your move?
2. **Which layer got you:** the cost, the clock, or who was behind it? Which is hardest to see in real life, and why?
3. **The countdown was always fake.** Where have you seen a fake deadline outside the game? What does a seller gain by rushing you?
4. **Why would someone sign a trap they know is a trap?** (In the game, shortcuts worked for a while.) What would they need instead? No wrong answers: this is about choices under pressure, not blame.
5. **Which honest deal surprised you?** Where could someone in our town find a credit union, free tax prep, or a sliding-scale clinic?
6. **Your block only won by teaching.** Who taught you to read a bill or a contract? Who could you teach this week?
7. **The Machine.** The blue layers showed traps sharing owners. Is that true in our town? How could you find out?

Quick math (answer key)

- **Payday loan.** \$56.25 on \$375 for 14 days = 15% every two weeks. $15\% \times \text{about } 26 \text{ two-week periods} = \mathbf{391\% \text{ a year}}$. The typical borrower pays that fee 8 times: $8 \times \$56.25 = \mathbf{\$450 \text{ in fees}}$ on a \$375 loan.
- **Rent-to-own.** \$20 a week $\times 78 \text{ weeks} = \mathbf{\$1,560}$ for a couch that retails around \$500, about 3 $\times$ the price.
- **Overdraft.** A \$4 coffee plus a ~\$35 fee = **\$39**: an extra 875%, from one swipe.

For more, turn on **House rules** → **Endless deals** → **Work it out**: students calculate every second number before the red layer opens.

Going further

- **A week of it:** one day per district (Lending, Housing, Education), each opening with three Endless deals and closing with question 1.
- **Your City edition:** put your own neighborhoods, gathering places and real local help on the board, in the browser, with no code.
- **The novel:** *The Second Number* (Book One) is built on the same rules. Assign its opening chapters the same week; the lens on the table and the Sight on the page explain each other.
- **Privacy:** no accounts and nothing uploaded. Result codes hold only the first names students type and how the game went, and the Teacher's view keeps them in your browser.