Handout #1

ROUND-I: Introduction to Rounding and Estimation

Into: Rounding and Money

LESSON OBJECTIVE

When you complete this lesson, you will be able:

- To round to a nearest place value using pictures and manipulatables.

Talk About . . .

• **What is Rounding.** For example: *It's a **process where one finds the closest estimate** of a number to a stated place value. It sounds kind of complicated, but associate rounding with the words **about**, **closest** and **estimate**.*

• **Rounding and The Real World.** For example: *When are you ever going to round in real life? You've probably used it already when **working with money**. For example, if a television at a store costs $199 dollars, about how much money do you need to buy it: $100 or $200 dollars?*

Circle the **most** correct answer.

Rounding is associated with: addition | area | estimation | fractions

Define rounding in your own words. Can you think of another situation where you might use rounding?

REVIEW

To round you need to be able to **identify place value**. Take the following number:

5 2 8

With your tutor:

- Point out the **hundreds place**.
- Point out the **tens place**.
- Point out the **ones place**.

Make up a number less than 1,000. Then, point out the tens place and the hundreds place.

Handout #1

ROUND-I: Introduction to Rounding and Estimation

How To: Round Using Money Cutouts

Before jumping in with an example, let's look at the keysteps to rounding.

KEY STEPS

To round we need to find out:

1 Determine what **two** numbers you are rounding **between**.

2 Determine to which number your number is **closet**.

We are going to round **$239** to the **nearest hundred dollar**. How are we going to answer this question? Let's take the following steps:

1 Between what two numbers are we rounding? (Hint: To figure this out, you need to know to what place value you are rounding.)

2 Make piles of money representing these numbers. Then make a pile of money for the number you are rounding and put that in the middle.

3 Finally, answer the question 'To which pile of money is $239 closest?'

NOTE TO TUTOR

Money cutouts are attached to this handout.

With your tutor's help, try the following problems:

Round $337 to the nearest hundred dollar:

Round $337 to the nearest ten dollar:

Round $431 to the nearest ten dollar:

Round $431 to the nearest thousand dollar:

Handout #1

ROUND-I: Introduction to Rounding and Estimation

How To: Round Using Number Blocks

We are going to round **128** to the **nearest ten**.

1 What place value are we rounding to?

NOTE TO TUTOR

You can use either 3D hundred, ten, one blocks (if available) or get 2D number block cutout equivalents in LESSON: PV-OTHT.

2 Between what two numbers are we rounding?

3 Make these two numbers out of your blocks. These are your **endpoints**.

4 Make 128 out of your number blocks.

5 Answer 'To which endpoint is 125 closer to?'.

With your tutor's help, try the following problems:

Round 592 to the nearest hundred:

Round 592 to the nearest ten:

Round 309 to the nearest hundred:

Round 309 to the nearest ten:

Handout #1

ROUND-I: Introduction to Rounding and Estimation

Investigate: Rounding Numbers in the Middle

REMEMBER!

If the number you are rounding falls right in the middle **you round up!**

With your tutor, use your number blocks to round 50 to the nearest hundred:

Does your answer make sense? Why or why not?

What's special about this example?

With your tutor, use your money cutouts to round $500 to the nearest thousand dollars:

Investigate: The Vanishing Number

REMEMBER!

One of the endpoints can be 0. If the number you are rounding is closer to zero, that's your answer!

With your tutor, use your number blocks to round 43 to the nearest hundred:

Does your answer make sense? Why or why not?

What's special about this example?

With your tutor, use your money cutouts to round $199 to the nearest thousand dollars:

Handout #1

ROUND-I: Introduction to Rounding and Estimation

Questions

Q1 Rounding is associated with which words:

A. Add and subtract.

B. Fractions and percents.

C. Up and down.

D. Closest and estimate.

DEFINITION: ROUNDING

A process of finding the closet estimate of a number to stated place value.

It sounds kinda complicated, but assoicate rounding with **closest** and **estimate**

Q2 To your left is a definition of rounding. Read it carefully and then, in your own words, describe what rounding is:

Q3 Using money cutouts, round $283 to the nearest ten dollars:

Q4 Using number blocks or cutouts, round 45 to the nearest ten:

Q5 Using money cutouts, round $550 to the nearest hundred dollars:

Q6 Using number blocks or cutouts, round 349 to the nearest hundred:

Q7 Using money cutouts, round $422 to the nearest thousand dollars:

Q8 Using number blocks or cutouts, round 45 to the nearest hundred:

Closure

In this lesson, we learned:

- The definition of rounding. We learned that rounding is defined as:

  A process of finding the closet estimate of a number to stated place value.

  It sounds kinda complicated, but assoicate rounding with **closest** and **estimate**

- The key steps to the rounding process. Some key steps in the rounding process are:

  1 Determine what **two** numbers you are rounding **between**.

  2 Determine to which number your number is **closet**.

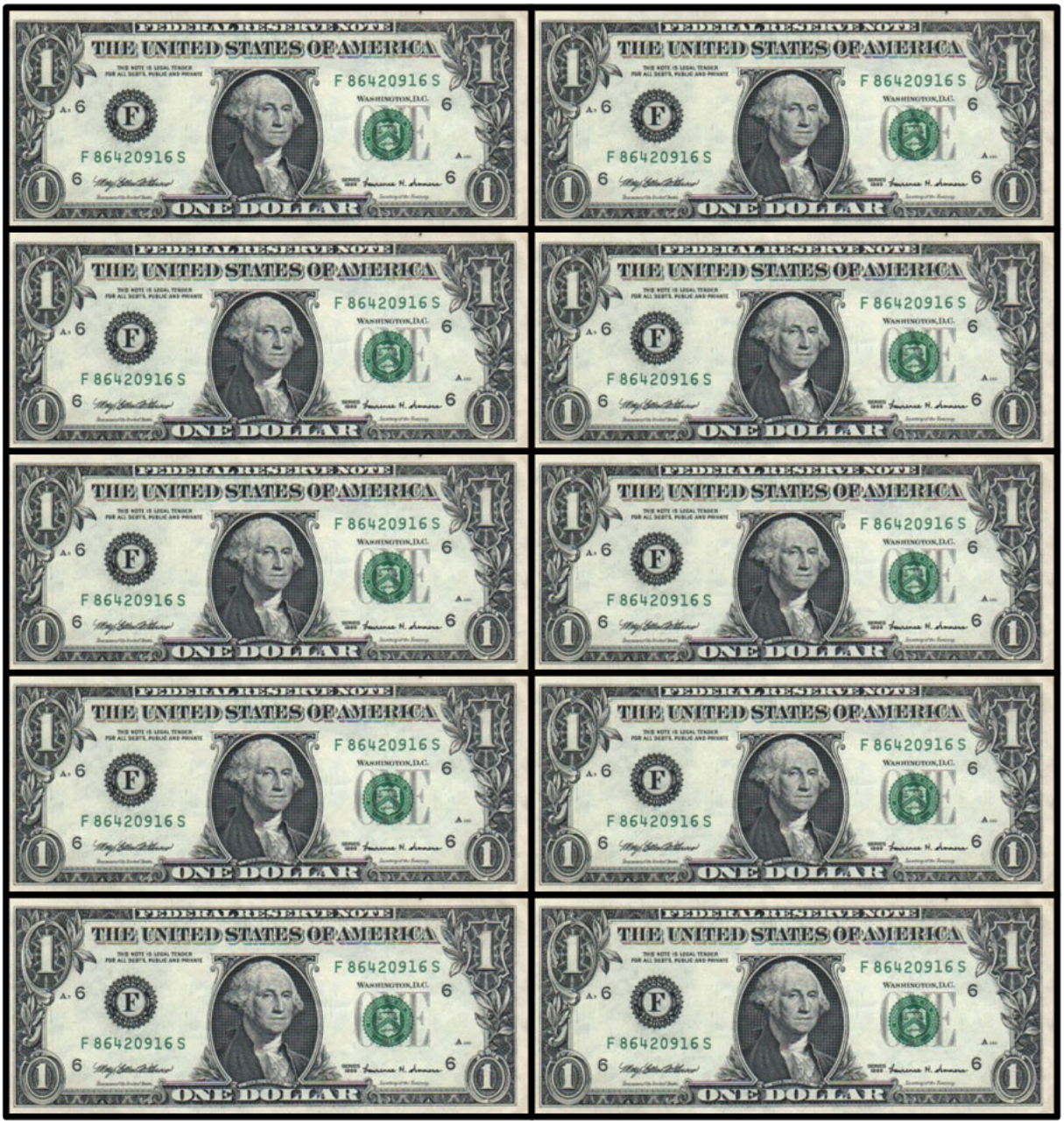
- How to use objects (manipulatables) to help us visualize the rounding process.

In your own words, answer the question "what did we learn in this lesson?". First, tell your tutor out loud. Then, write your answer below:

Handout #1

ROUND-I: Introduction to Rounding and Estimation

-- cutouts --



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ROUND-I: Introduction to Rounding and Estimation

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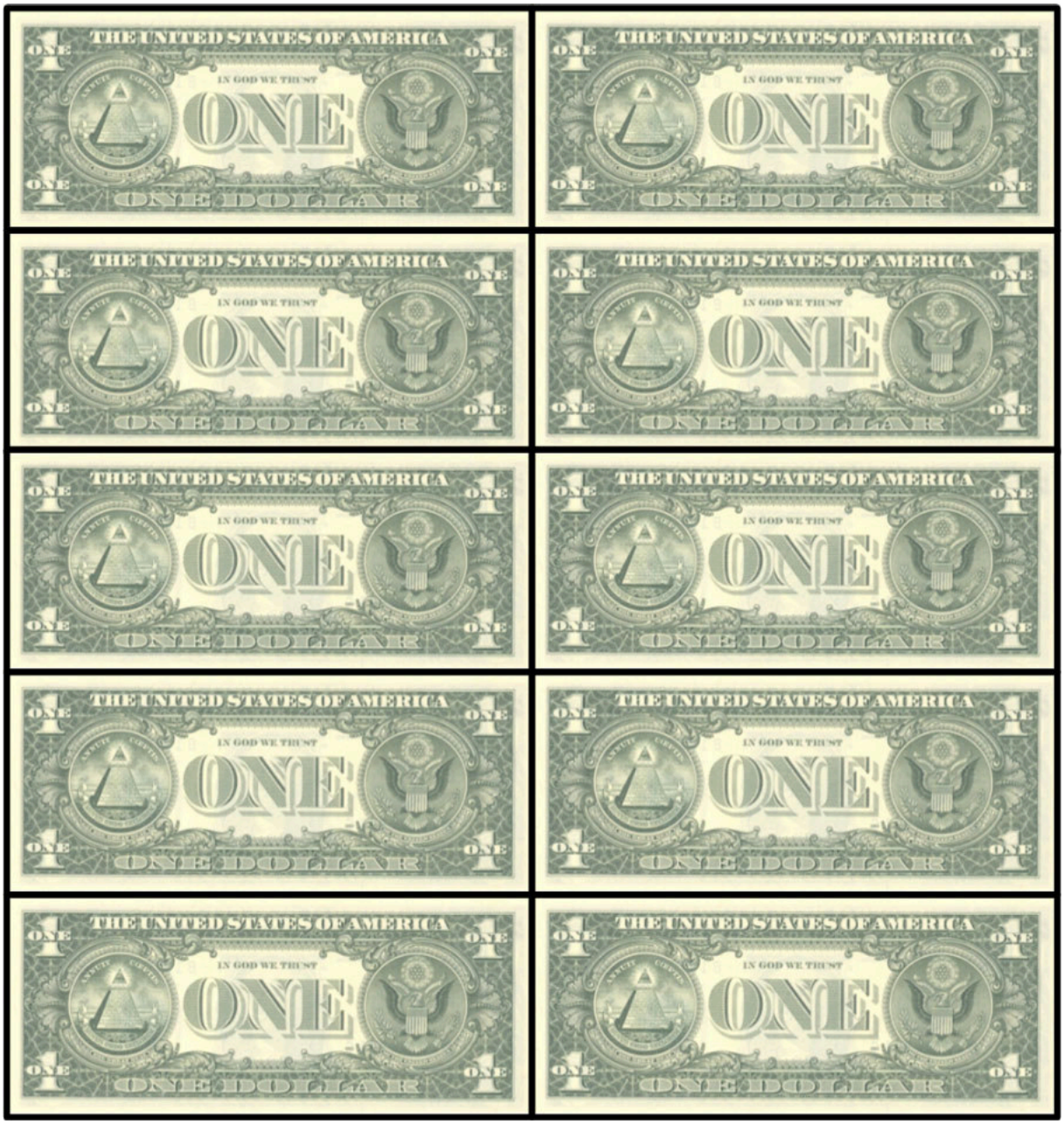

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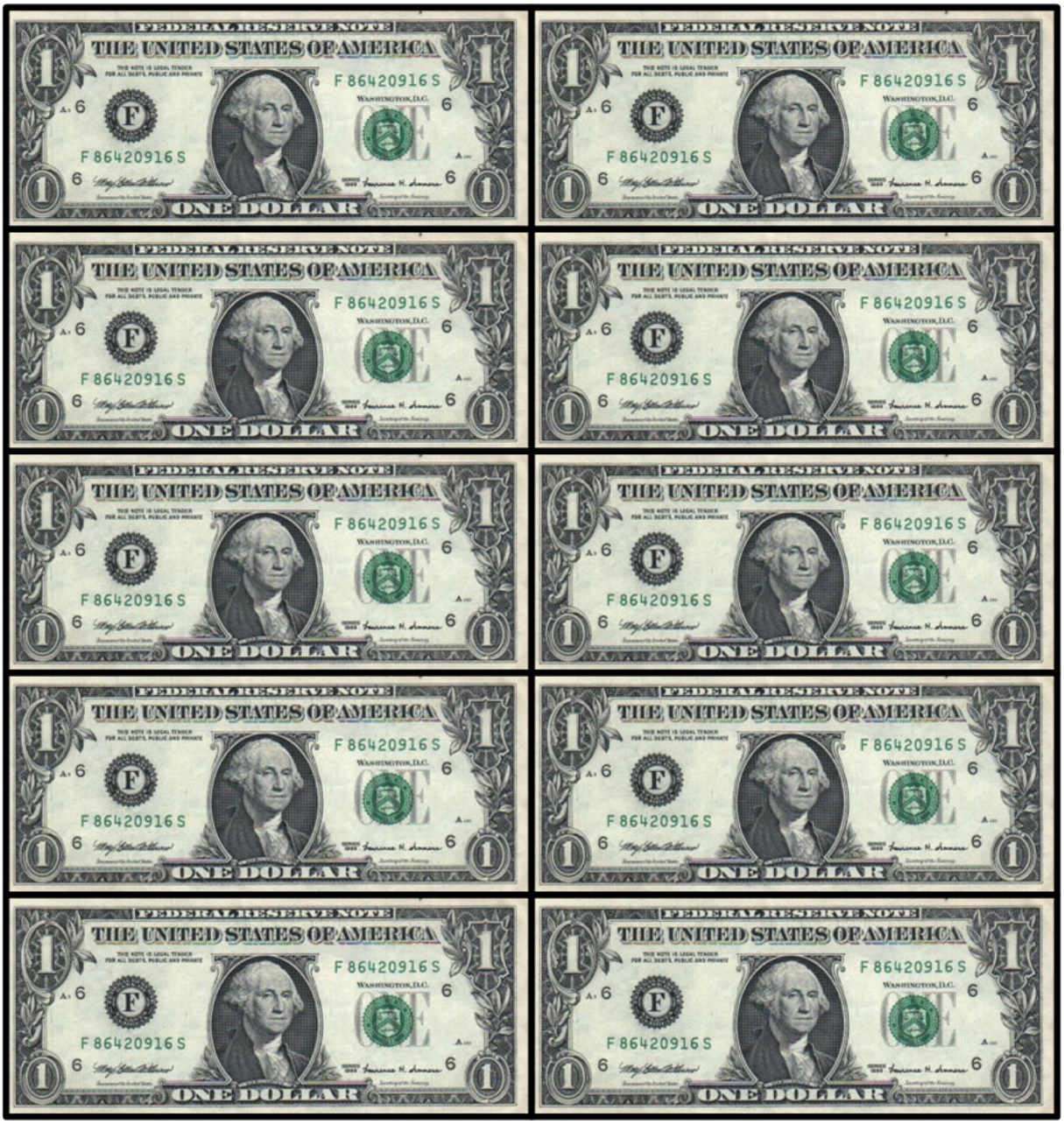

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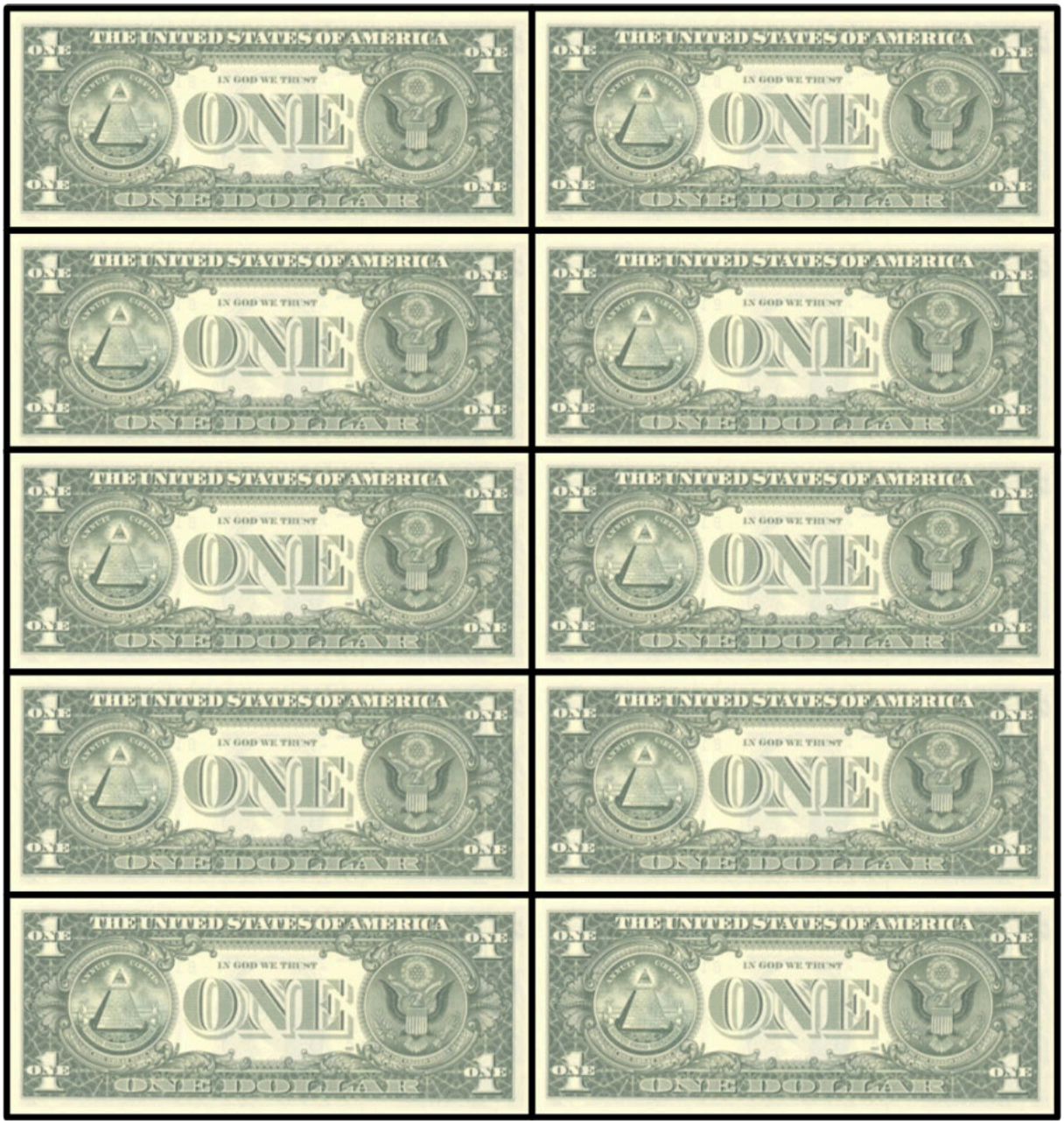

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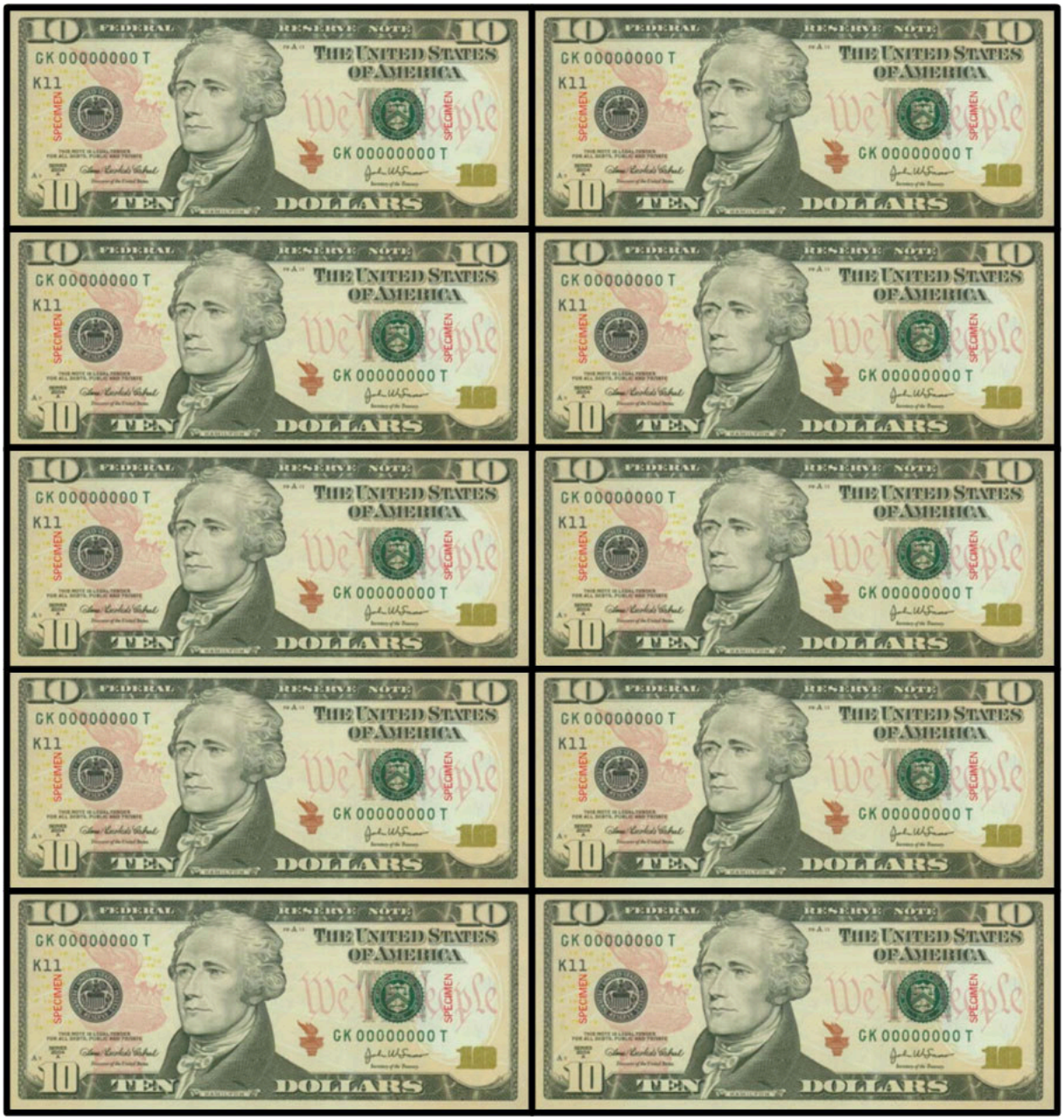

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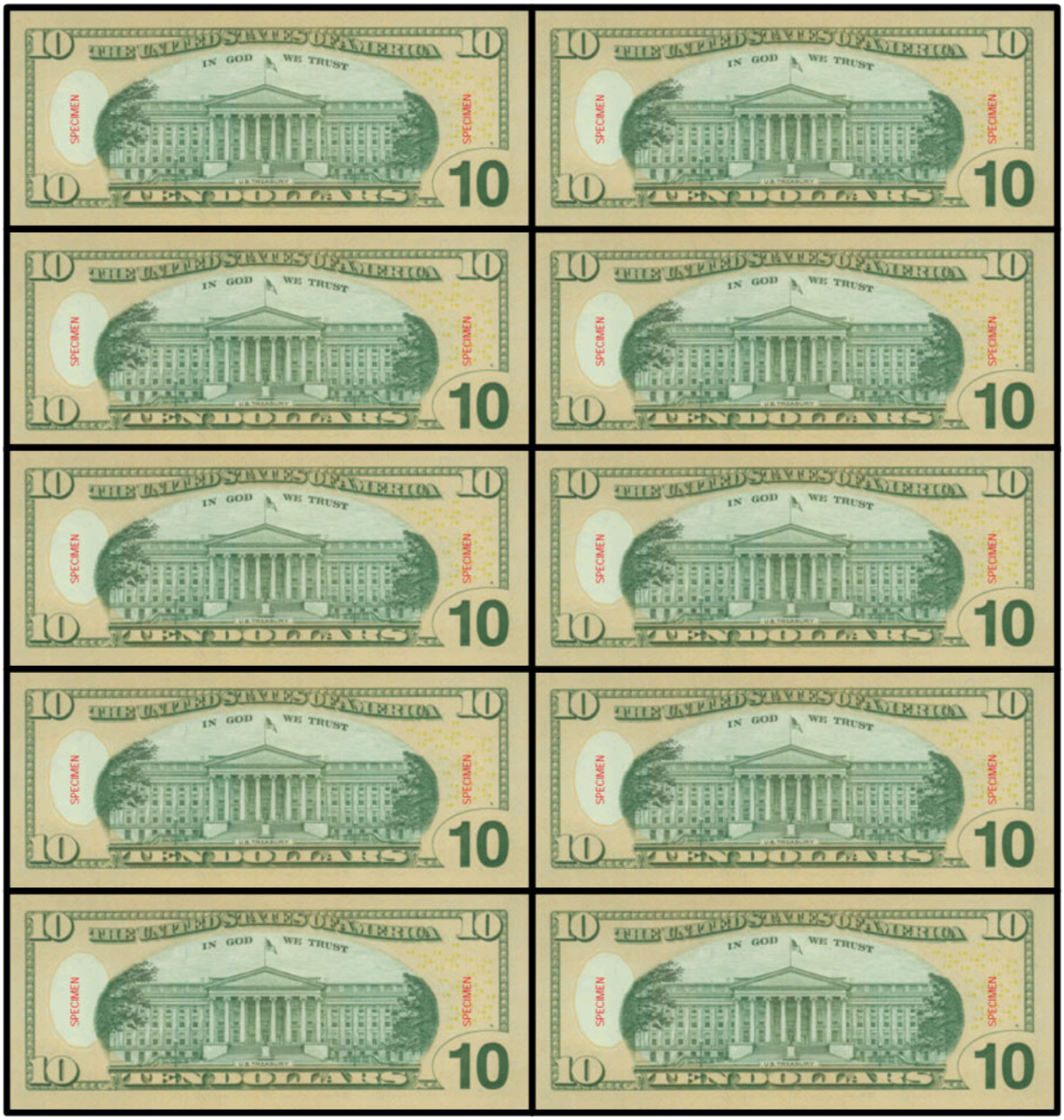

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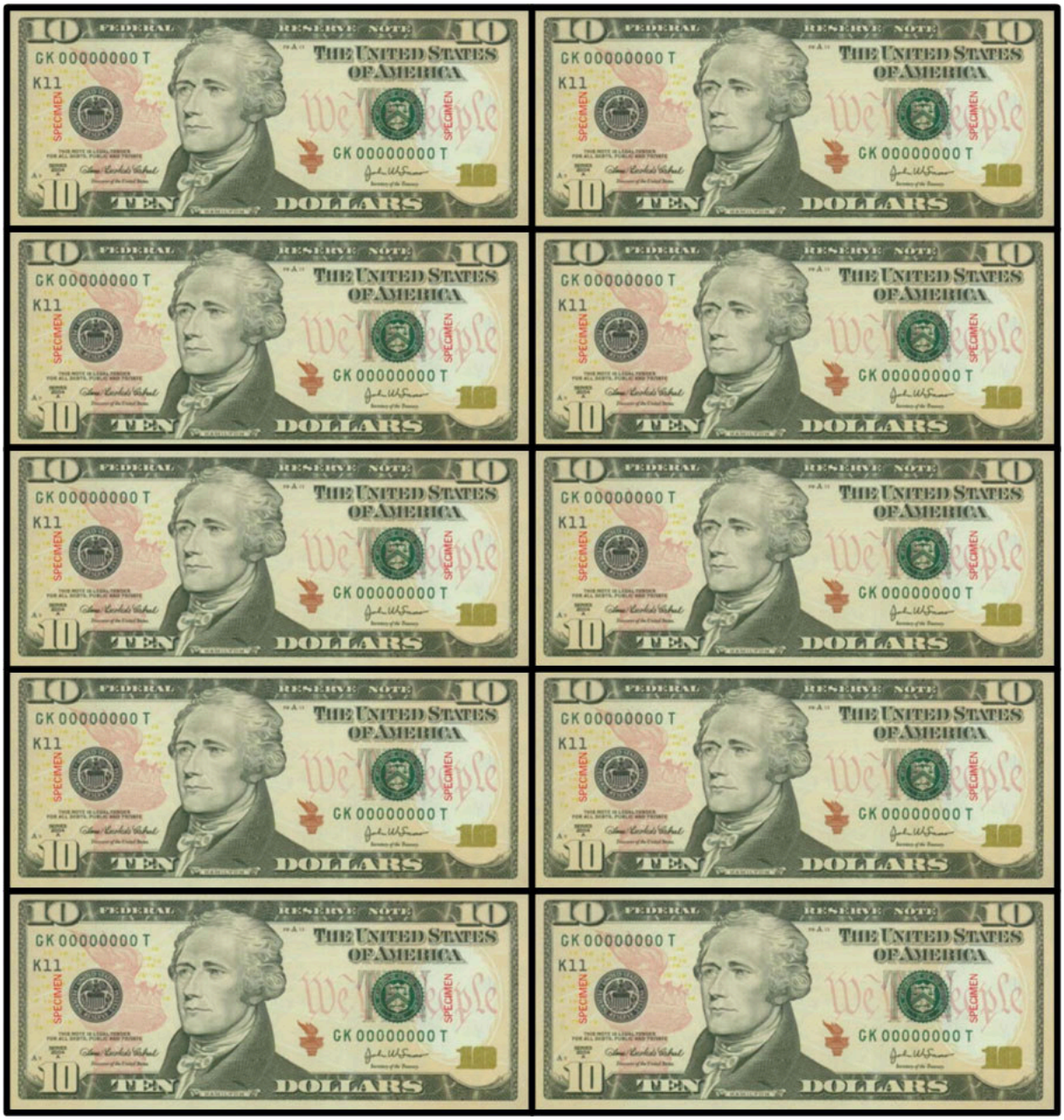

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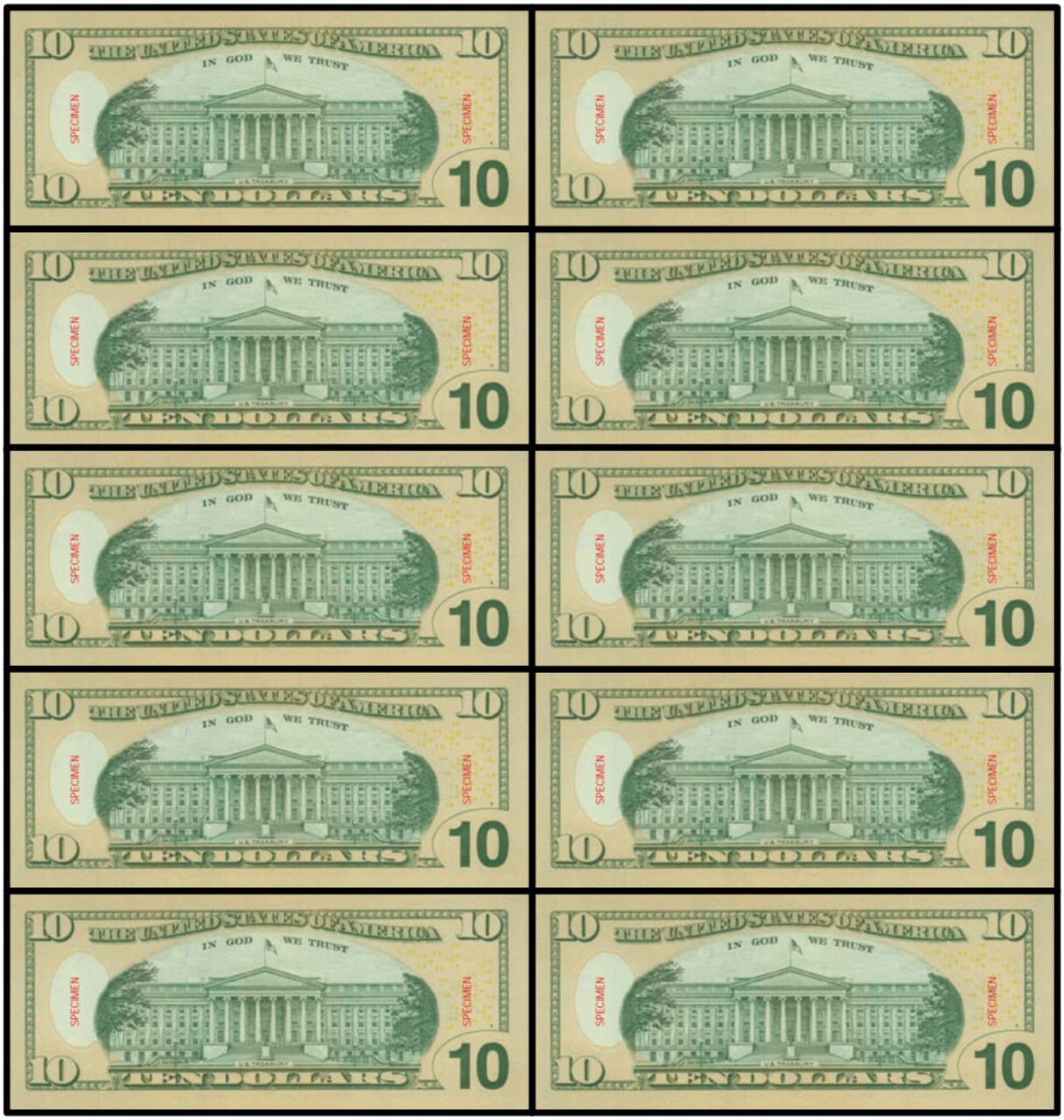

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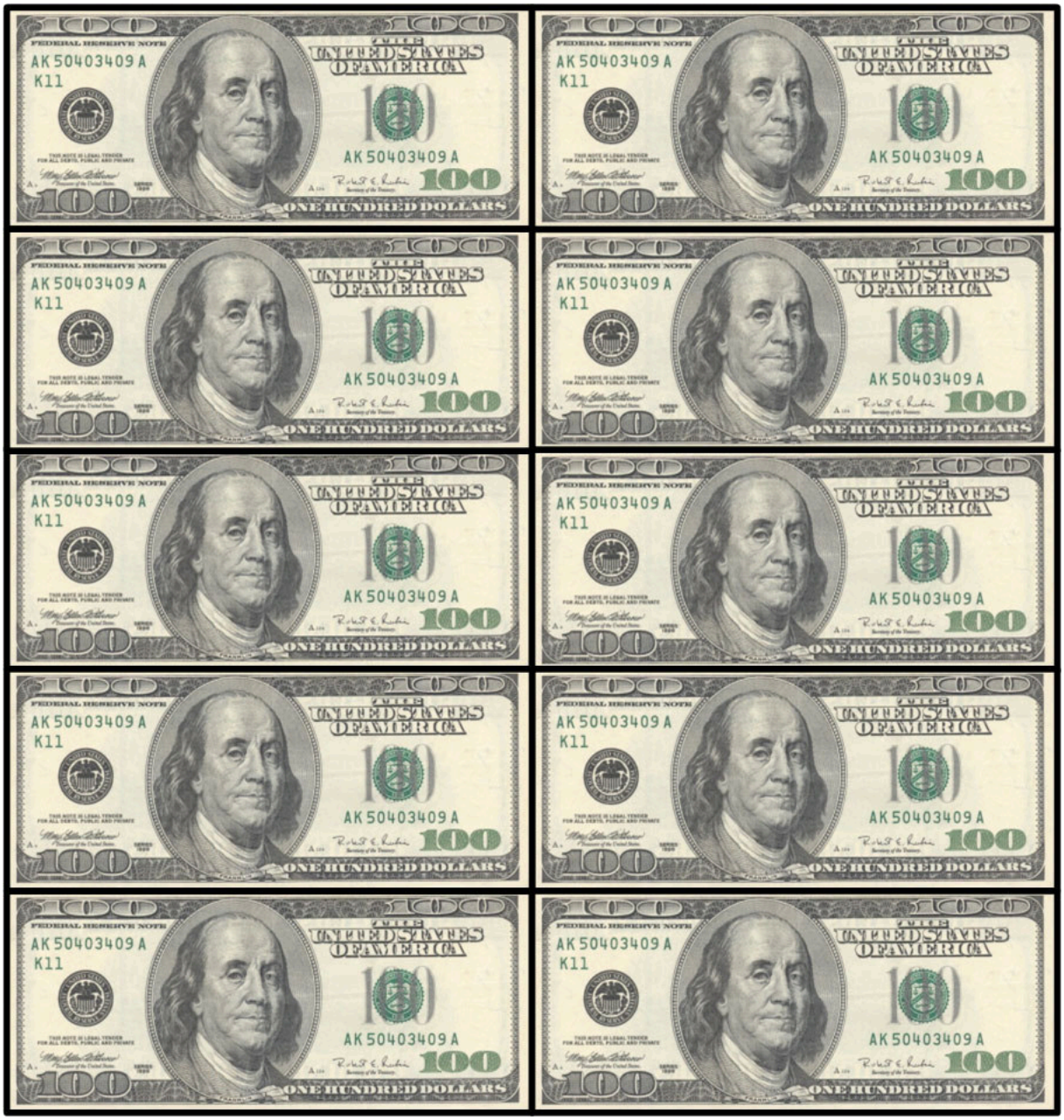

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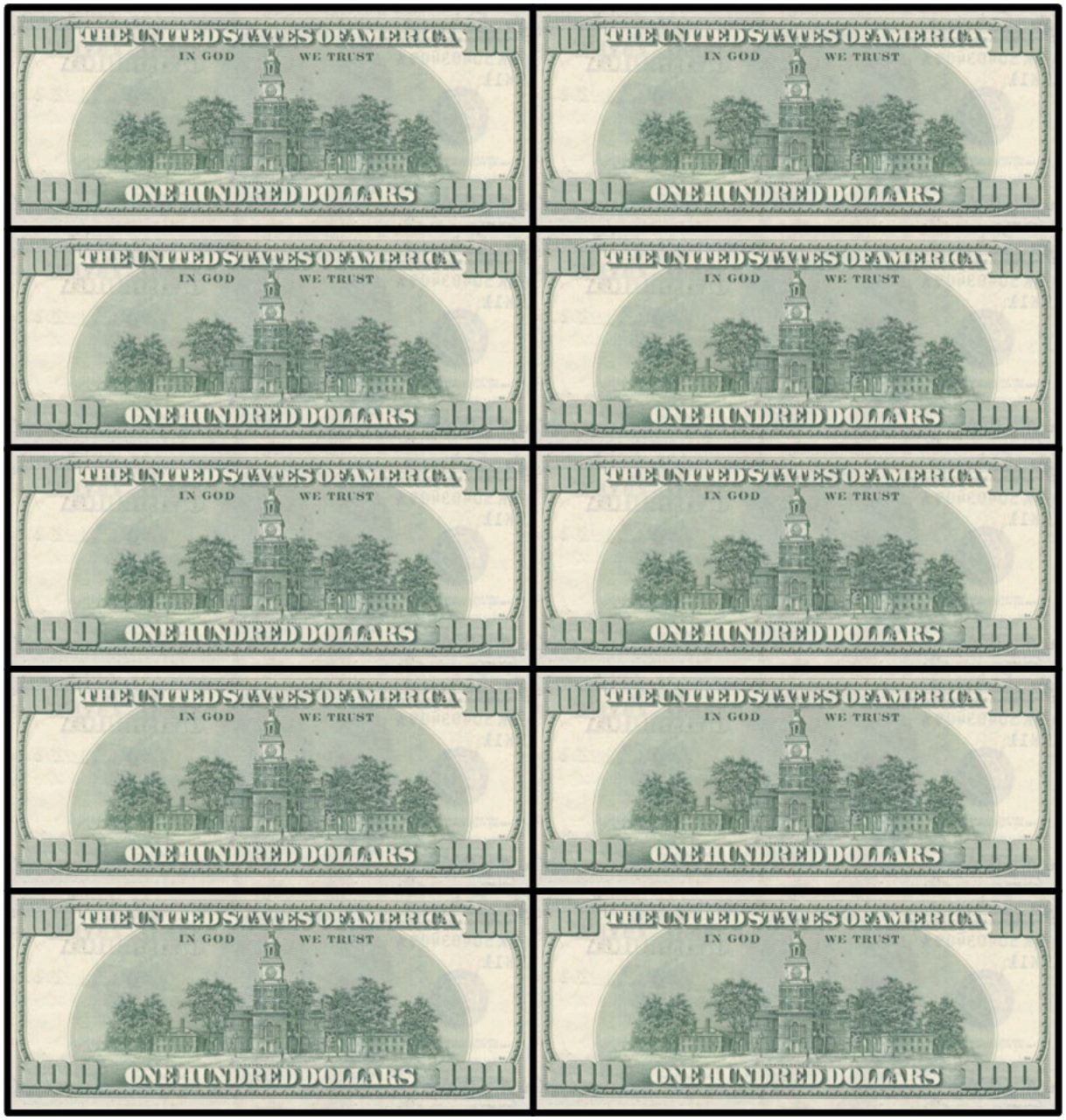

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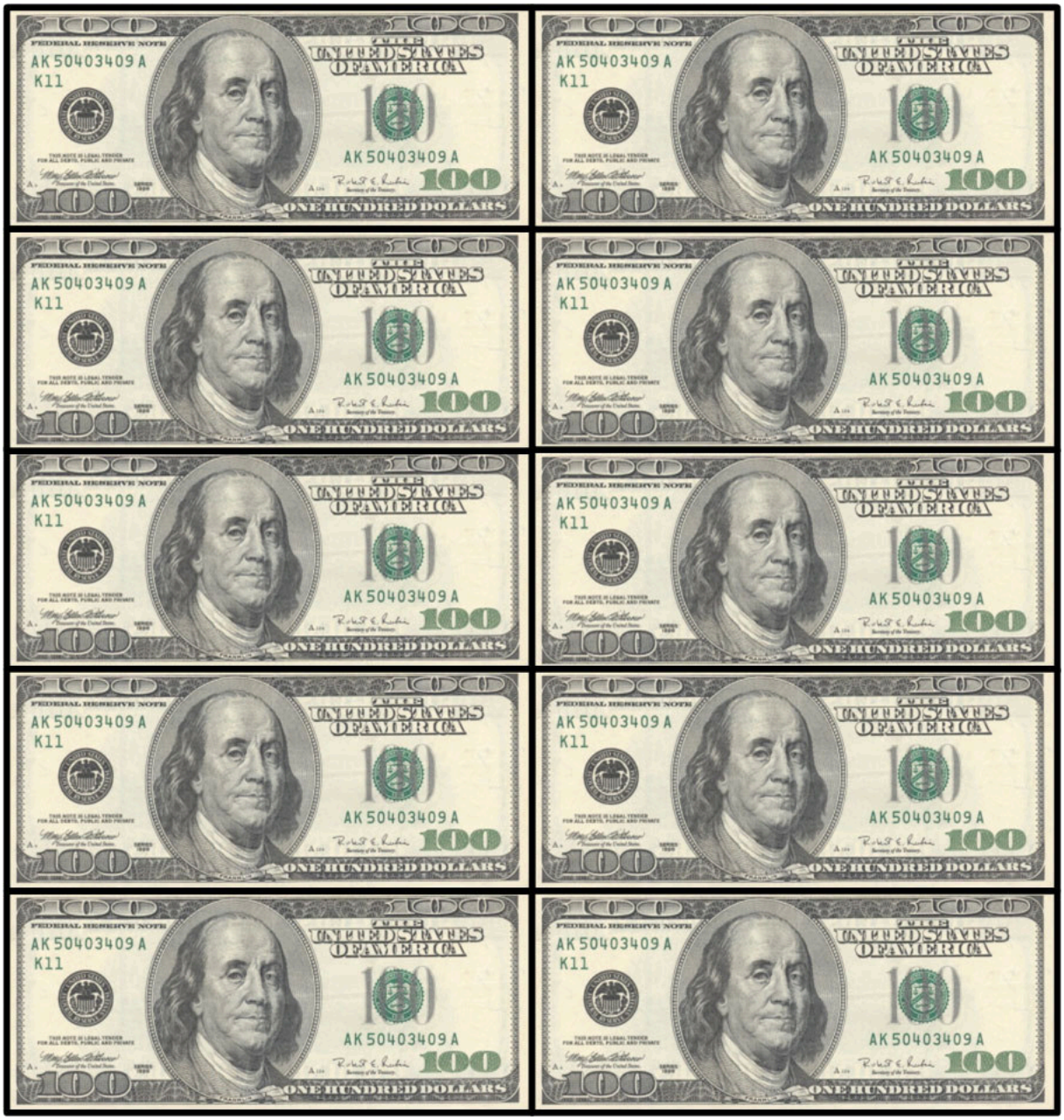

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