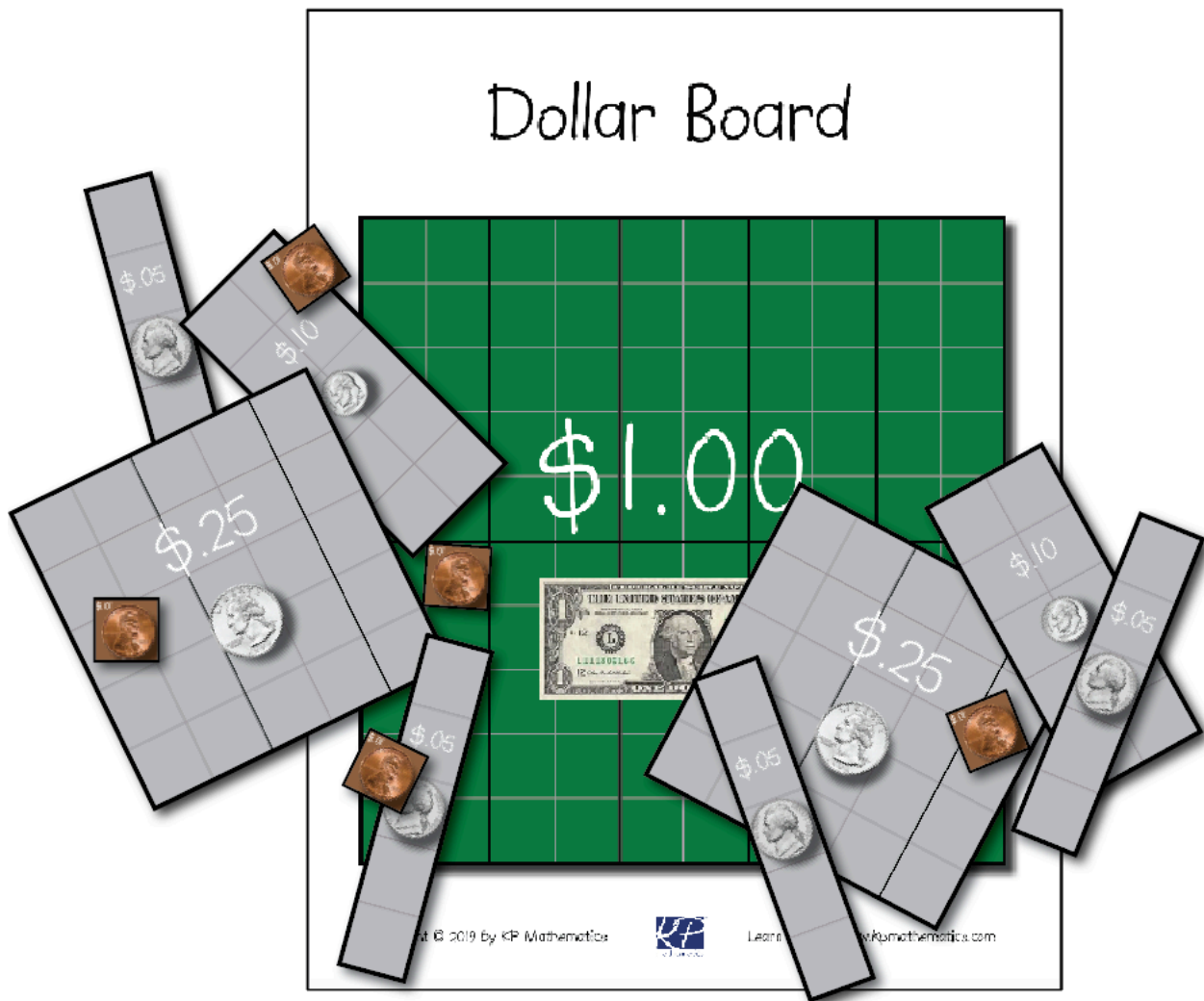


KP[®] Ten-Frame Money Boards



KP® Ten-Frame Money Boards

Because coins carry no physical clue about their values, using coins to teach coins often fails as a method of instruction for many students. (Witness the fact that even many adults are unable to make change without consulting the cash register.) KP Money Boards provide the means by which students learn the values of coins relative to one dollar and to one another. This method of instruction begins with the ten-frame.



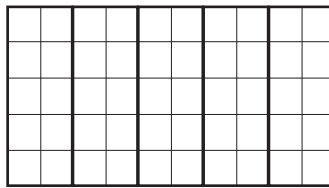
The Ten-Frame

The ten-frame, a visual organizer for numbers 0-10, can be extended and partitioned to represent multiple ten-frames and fractional ten-frames.

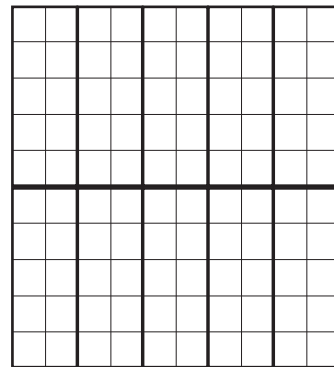
1 ten-frame



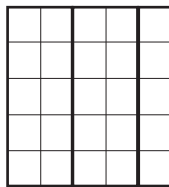
5 ten-frames



10 ten-frames



$2\frac{1}{2}$ ten-frames



$\frac{1}{2}$ ten-frame

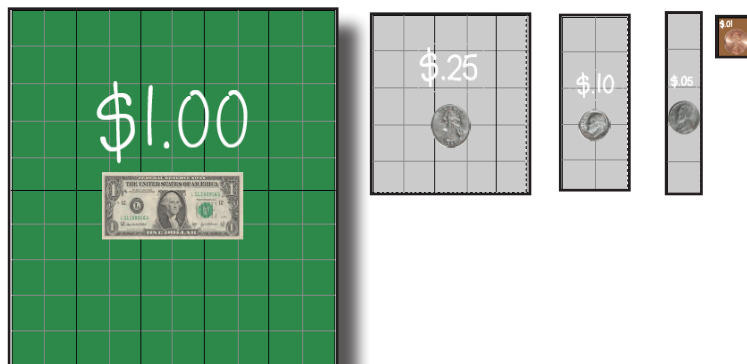


$\frac{1}{10}$ ten-frame



KP Money Boards

KP Money Boards are ten-frames, multiple ten-frames, and fractional ten-frames. The Dollar Board, represented by 10 ten-frames, is the “whole.” Each Puzzle-Piece Coin is represented by a fractional part of the Dollar Board: the Puzzle-Piece Quarter is $2\frac{1}{2}$ ten-frames, the Puzzle-Piece Dime is 1 ten-frame, the Puzzle-Piece Nickel is $\frac{1}{2}$ a ten-frame, and the Puzzle-Piece Penny is $\frac{1}{10}$ of a ten-frame. (Because the 50-cent piece is in limited use, we have omitted the corresponding Puzzle Piece Half-Dollar from our Money Board set.)

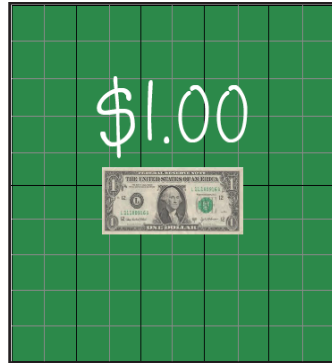


KP Money Boards help students distinguish between *quantity* and *value*. Unlike the coins they represent, Puzzle-Piece Coins' relative sizes denote their values. The physical *sizes* of the Dollar Board and of the Puzzle-Piece Coins is determined by the size of a single cell of the ten-frame. That single unit is the penny, the “piece” that is common to each coin and to the dollar. No longer will students prefer to have 50 pennies instead of 1 dollar!

KP® Money Boards as Teaching Tools

KP Money Boards are used to teach a variety of money-related concepts and skills. Use the images shown here to visualize the movements described in the titled descriptions below.

In the situations described below, students first use Puzzle-Piece Coins to carry out steps that may be difficult to understand were they using real (or play) coins. Then, using the coin pictures on the Puzzle-Piece Coins as guides, they replicate the actions with coins (also included for printing).



Coin Equivalences to \$1.00

Students discover each coin's quantitative relationship to \$1.00 by using the Puzzle-Piece Coins on the Dollar Board. They discover that it takes 4 Quarters, 10 Dimes, 20 Nickels, and 100 Pennies to equal \$1.00.

Coin Equivalences to Other Coins

In the same way that students use Puzzle-Piece Coins on a Dollar Board, they can use Puzzle-Piece Coins as boards on which to place "smaller" Puzzle-Piece Coins. They discover, for example, that there are four ways to make \$0.10: 1 dime, 2 nickels, 1 nickel and 5 pennies, and 10 pennies. They can find the two coin equivalences of \$0.05 and experiment to find some of the many coin equivalences of \$0.25.

Counting to a Given Amount of Money up to \$1.00

Counting money involves counting *value* instead of *quantity*. Students place Puzzle-Piece Coins on the Dollar Board to a given amount, value-counting (skip counting) as they go, beginning with the largest Puzzle-Piece Coin(s) and ending with the smallest in whatever combination they choose. For example, to value-count to \$0.72, they may place Puzzle-Piece Coins on the Dollar Board like this: 2 Quarters, 1 Dime, 2 Nickels, and 2 Pennies and count them like this: 25, 50, 60, 65, 70, 71, 72. Of course, many other coin combinations are possible.

Making Change from \$1.00.

Suppose an item costing \$0.72 is purchased with a \$1 bill. Students place Puzzle-Piece Coins equaling \$0.72 on the Dollar Board. They turn the "Coins" over in place and fill the remaining green portion with Puzzle-Piece Coins, beginning with the largest and value-counting as they go. With this method, they have determined the change.

Counting past \$1.00 by Counting in Groups of \$1.00s.

Once students learn to organize their Puzzle-Piece Coins in order of size and to skip count their values, they practice doing the same thing with the "real" coins included on the last page of the download. They can, of course, count money well past \$1.00 by counting up to \$1.00 in coins as many times as the number of coins requires and then counting each \$1.00 coin-group.

Dollar Board

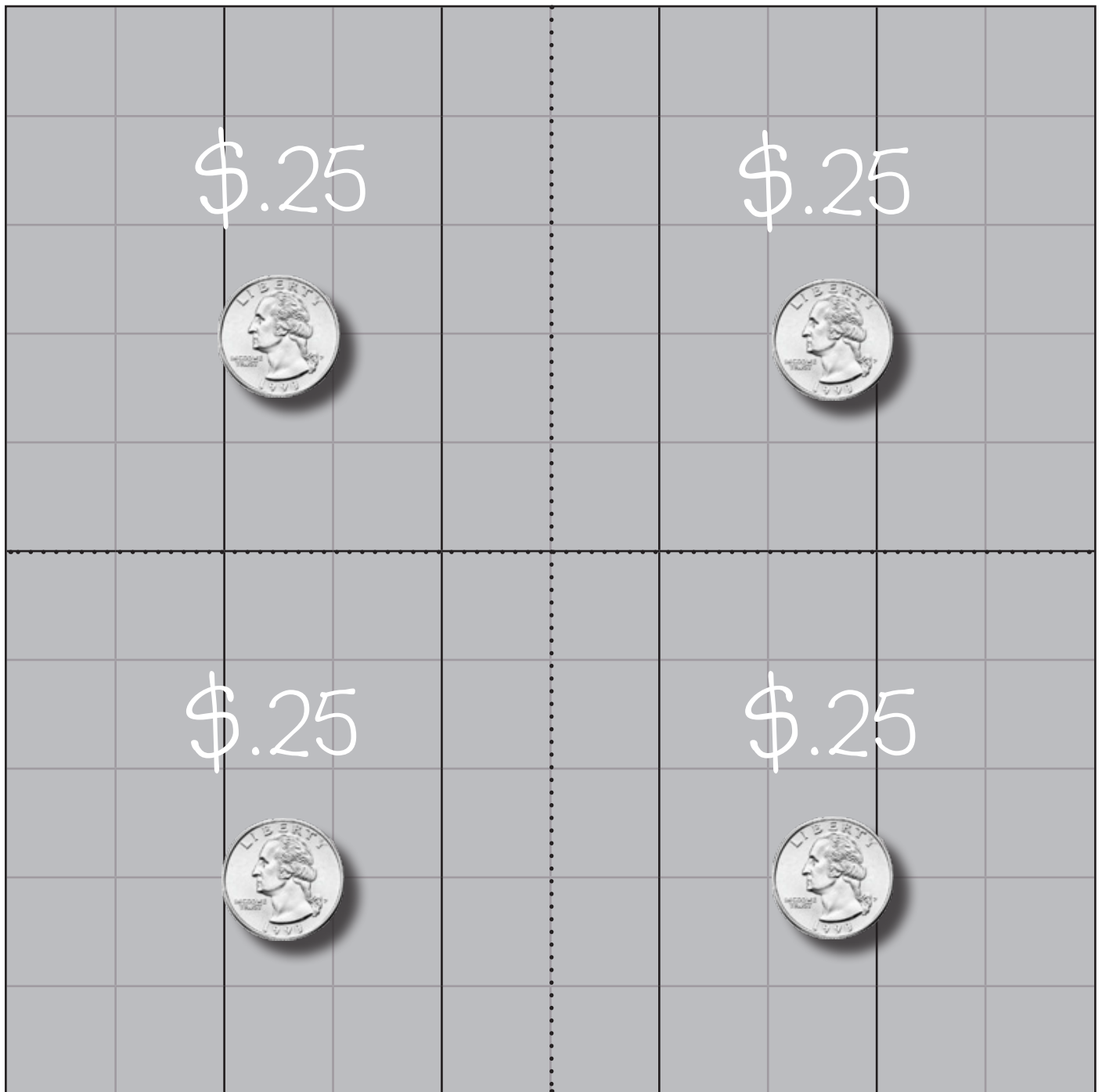
\$1.00



Puzzle-Piece Quarters













Cut out "quarters" on the dotted lines.



Puzzle-Piece Dimes



Cut out "dimes" on the dotted lines.









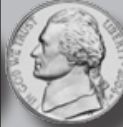









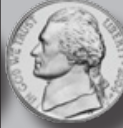

\$.10	\$.10	\$.10	\$.10	\$.10
				
\$.10	\$.10	\$.10	\$.10	\$.10
				

Puzzle-Piece Nickels



Cut out "nickels" on the dotted lines.

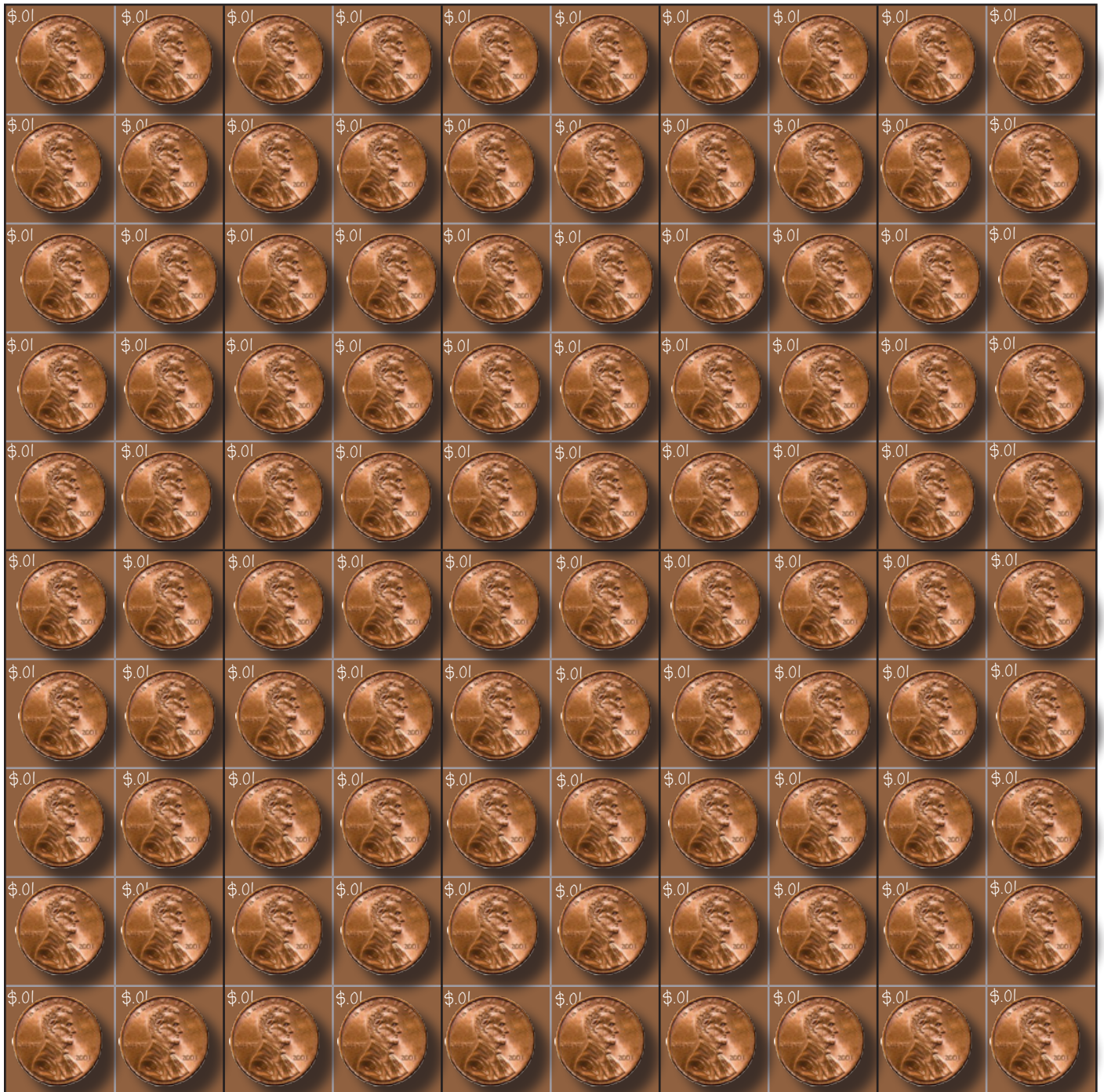


\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05
									
.....									
\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05	\$.05
									

Puzzle-Piece Pennies



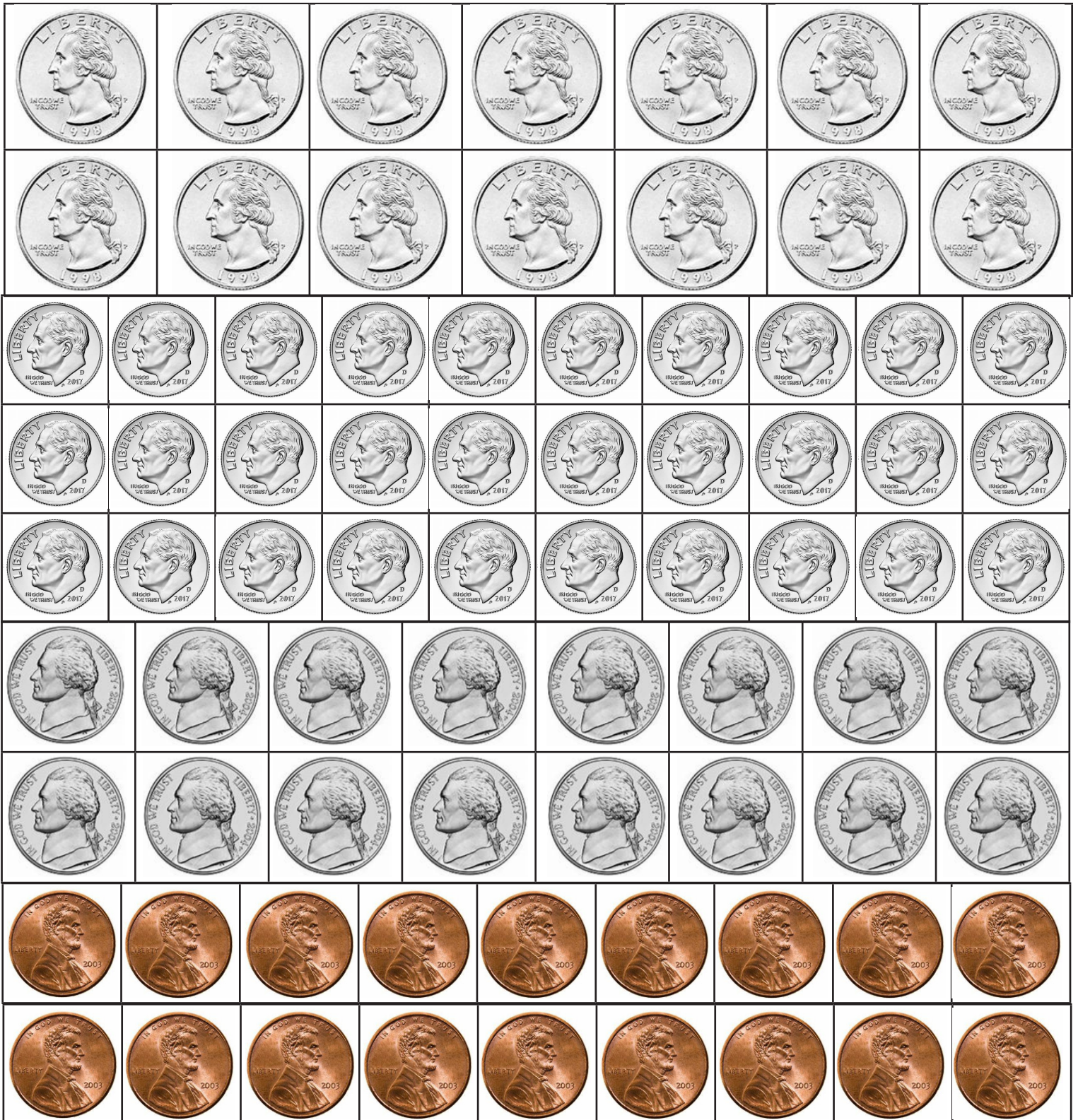
Cut out "pennies" on the lines.



Cut-Out Coins



Cut out each coin.



Dollar Bills



Cut out bills on lines.

\$1.00

\$1.00

\$1.00