

Making change with two coins

We can initialize the first 12 values using what we figured out before (i.e., for $x = 1, 2, \dots, 12$ we already know the answers).

Now suppose we have figured out the correct values for $Change[x]$ for all $x = 1, 2, \dots, N$.

Suppose we *can* make change for x cents. What would that look like, given that $x > 12$?

- ▶ Observation: The change would have to have at least one 5 cent coin or at least one 7 cent coin.

So: if $Change[x]$ is true, then at least one of $Change[x - 7]$ and $Change[x - 5]$ is true.