

Making Change



Figure out several ways you can make 50 cents.

What you need

Real or play coins

50 pennies

20 nickels

15 dimes

6 quarters

Paper and pencil

What to do

1. Use the coins to make a combination equal to 50 cents.
2. Now, come up with a different way to make 50 cents.
3. Organize your coins in some way to keep track of your solutions.
4. How many different ways can you make 50 cents?

What to ask

- Can you figure out all the possible ways to make 50 cents? Why or why not?
- Is it possible to make 50 cents using exactly two coins? Four coins? Fifteen coins?
- How can you use one of the combinations you made to make another new combination?
- Which combinations can you use in a vending machine?



Did you know?

Making exact change is not necessary for transactions in the real world. Vending machines and stores just simply give change or ask for more. However, understanding how to make exact change can be challenging and fun. Finding combinations and knowing if you have found them all is one way to introduce probability concepts to young children. Organizing the solutions and understanding how previous solutions can lead to other solutions helps children learn about problem solving.





What's next?

- Grab a handful of change. Do you think it is more or less than 50 cents? How do you know? Count the change. How close are you?
- Try to find coin combinations that equal higher amounts, like 75 cents or a dollar.

To learn more

Alexander, Who Used To Be Rich Last Sunday

by Judith Viorst

Last Sunday, Alexander's grandparents gave him a dollar and he was rich. There were so many things he could do with all of that money! He could buy as much gum as he wanted, or even a walkie-talkie, if he saved enough. But somehow the money began to disappear.

Arthur's Funny Money

by Lillian Hoban

When Violet has a numbers problem and Arthur is penniless, they go into business and solve both problems.

Bunny Money

by Rosemary Wells

Max and Ruby take the bus downtown to buy a birthday gift for their grandma. They spend so much money on emergencies that they don't have enough for the bus fare home.

<http://www.funbrain.com/cashreg/index.html>

Change Maker – This multi-skill level game allows children to make change for various amounts of money. Uses actual pictures of money from which they can choose their own change combination. You can even do it with currency from England, Mexico, Canada, and Australia!

How it helps with school

Texas Essential Knowledge and Skills (TEKS) Standards

Number Operation and Quantitative Reasoning: 3.1C, 3.2D, 3.3A-B; 4.3A; 5.3A

Probability and Statistics: 3.14A

Underlying Processes and Mathematical Tools: 3.15A,C-D; 4.14A,C-D; 5.14A,C-D

National Council of Teachers of Mathematics (NCTM) Standards

Number and Operations, Data Analysis and Probability, Problem Solving, Communication, Representation