

1 If you only have dimes, nickels, and pennies, in how many different ways can you make 21 cents? (you can use the same coin multiple times)

2 If you only have quarters, nickels, and pennies, how many ways could you make 36 cents such that you have exactly 9 coins?

3 You have 41 cents. No two coins have the same value. How many coins do you have?

4 You spent 75 cents on two pieces of candy. One of the candies cost 35 cents more than the other.

A - How much did each cost?

NAME	HEADS	TAILS	VALUE	SYMBOL	\$	¢
PENNY			1	Ⓟ	\$.01	1¢
NICKEL			5	Ⓝ	\$.05	5¢
DIME			10	Ⓣ	\$.10	10¢
QUARTER			25	Ⓠ	\$.25	25¢

If you have questions or suggestions

B - If you paid for each item separately with a combination of quarters, dimes, and nickels, how many combinations of coins could you have paid for the items with?

5 If you exchange three one-dollar bills for nickels and dimes and receive the exact same number of nickels as dimes, how many nickels do you get?

6 You have 18 cents in five coins. The last two coins have the same value. The middle coin is worth 4 cents more than the first coin.

A - How many possible ways are there to order the coins? What is one of the orders?

7 A game board is made up of 9 squares arranged in a 1 x 9 rectangle. Two players alternate moving a coin either 1 or 2 spaces forward. The coin is initially in a square at one end of the board and always moves toward the other end. The player who cannot make a move that stays on the board loses. Which of the two players can ensure victory? What's the strategy?

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