

Hidden Coins

Can you find out the maximum, and minimum, amount of money in the box?

Remember: each of the 20 coins in the box is worth either 1 or 2€.

Tip:

All coins can be the same type.

Does the total amount add up to 11 €, 21 €, 50€ or 30.5 €?

Think about how many coins you need to reach each of these values.

Argue why some of them are impossible.

Tip:

You must use all the 20 coins.

Could the percentage of 2€ coins in the box be 20%? What about 42%? What about 30.5%?

Can you calculate the % of 2€ coins in the box if only one of the 20 coins is a 2€ coin? What if there are only two 2€ coins? Calculate other possibilities.

Tip:

There are 20 coins in the box.

How much money do you "think" is in the box?

Shake the box 10 times. What percentage of ones have you observed? What percentage of ones do you think the box contains? How many ones and twos?

Tip:

Estimate how much money is in the box based on your previous answers.