Loop structures (while and for)

1. Dice rolls

a)

Write a program that counts how many dice rolls are needed to get a 6. Use `while` statement.

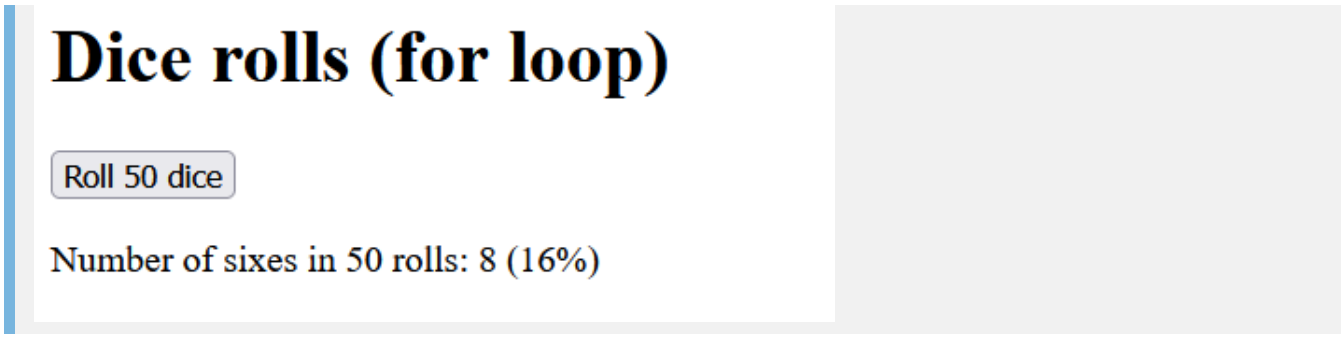
Hints

- The idea of the code is:

```
initialize the count variable to one (let count = 1)
roll the die (let die = Math.floor((Math.random() * 6) + 1))
while (die is not equal to 6) {
    increase the count variable by one
    roll the die
}
show the answer
```

b)

Write a program that rolls dice 50 times and tells how many times the number 6 appeared. Use `for` statement.



Hints

- The idea of the code is:

```
initialize the lkm variable to zero
for (var i=1; i<=50; i++) {
    roll the die
    if (die == 6)
        increase the lkm variable by one
}
show the answer
```

2. Insurance

Write a program that displays the insurance payment installments.

Hints

- The idea of the code is:

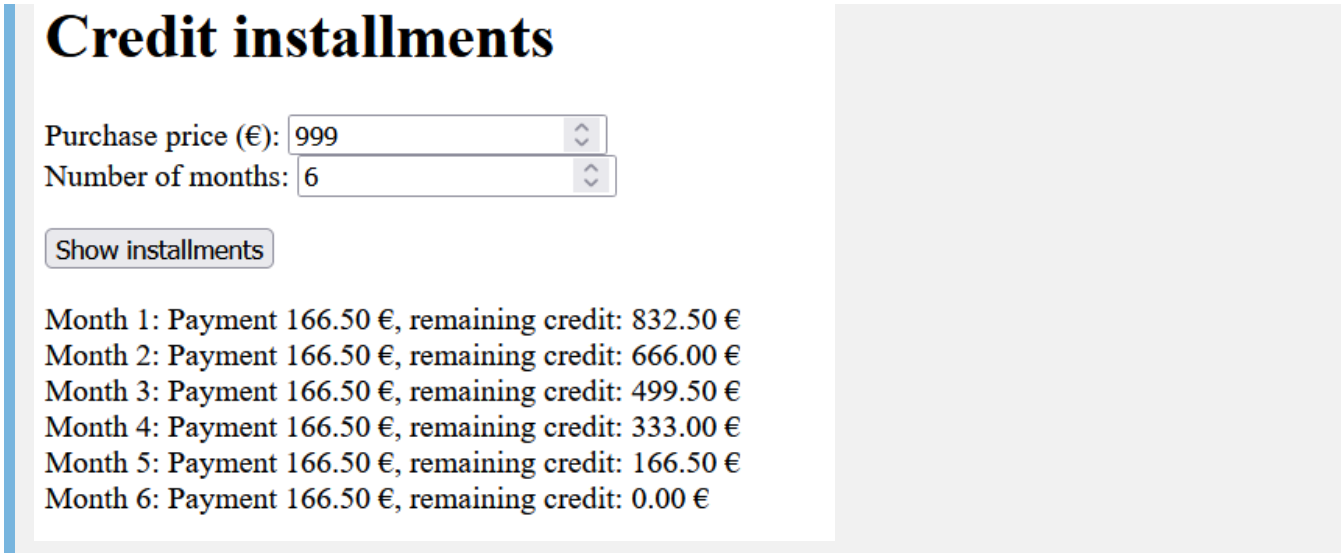
```
calculate the amount of a single installment
initialize a text variable as an empty string
for numberOfInstallments {
  add a line of text to the text variable
}
show the answer
```

- A single installment is calculated `insurancePayment / numberOfInstallments`

3. Credit

Write a program that asks for the price of a purchase made on credit and the number of installment months.

The program prints the amount to be paid each month and the remaining credit after each month.



4. Savings

Write a program that shows the growth of savings.

The program asks for the savings goal, the monthly saving amount, and shows how the savings grow.