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Homework 8	Name	Cheung, Won Sik

8_1

Code

```html
<!DOCTYPE html>

<html>
    <head>
        <script>
            //get nth fibonacci number
            function fibo(num){
                if(num == 0)
                    return 0;
                else if(num == 1)
                    return 1;
                else
                    return fibo(num-1)+fibo(num-2);
            }
            //make fibonacci array
            function makeFiboArray(num){
                var arr = [];
                for(i=0; i<num; i++){
                    arr.push(fibo(i));
                }
                return arr;
            }
        </script>
    </head>
    <body>
        <script>
            //print fibonacci array
            document.write(makeFiboArray(30).join(" "));
        </script>
    </body>
</html>
```
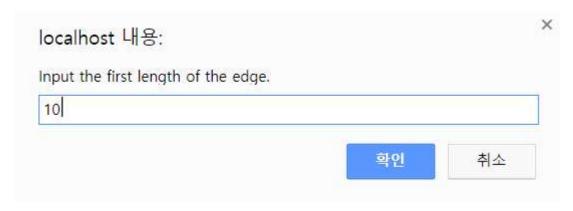
Result
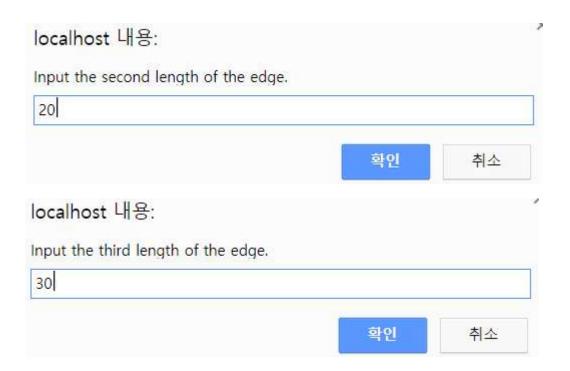
0 1 1 2 3 5 8 13 21 34 55 89 144 233 377 610 987 1597 2584 4181 6765 10946 17711 28657 46368 75025 121393 196418 317811 514229

8_2

Code

```html
<!DOCTYPE html>
<html>
    <head>
        <script>
            //get edges by using prompt
            var edge1 = prompt("Input the first length of the edge.", "Type
                Edge Length");
            var edge2 = prompt("Input the second length of the edge.", "
                Type Edge Length");
            var edge3 = prompt("Input the third length of the edge.", "Type
                Edge Length");
            var edges = [edge1, edge2, edge3];

            //calculate areas and volume
            var area1 = edge1*edge2;
            var area2 = edge2*edge3;
            var area3 = edge3*edge1;
            var areas = [area1, area2, area3];

            var volume = edge1*edge2*edge3;


            //print edges
            document.write("The given length of edge of a cuboid is " +
                edges.join("-")+"<br>");
            document.write("The surface area is "+areas.join("-")+" and the
                volume is "+volume);
        </script>
    </head>
    <body>
    </body>
</html>
```

Result

localhost 내용: ×

Input the first length of the edge.

10|

확인   취소

localhost 내용:

Input the second length of the edge.

20|

확인   취소

localhost 내용:

Input the third length of the edge.

30|

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The given length of edge of a cuboid is 10-20-30
The surface area is 200-600-300 and the volume is 6000

8_3

Code

```html
<!DOCTYPE html>
<html>
    <head>
        <script>
            var colors = ['red', 'orange', 'yellow', 'green', 'blue', 'navy'
                , 'purple', 'sky blue', 'brown', 'gray'];

            var arr = [];

            /*
            This code doesn't work
            It return arr['gray', 'brown', 'sky blue', 'purple', 'navy',
            'undefined', 'undefined']
            for(var i=0; i < colors.length; i++){
                arr.push(colors.pop());
            }
            */

            //make reverse order array by using pop, push
            for(var i = colors.length-1; i>=0; i--){
                arr.push(colors[i]);
                colors.pop();
            }

            //print array
            var printNum =7;
            for(var i=0; i<printNum; i++)
                document.write(arr[i]+" ");

        </script>
    </head>
    <body>
    </body>
</html>
```

Result

gray brown sky blue purple navy blue green

8_4

Code

```
<script>
    while(true){
        var num = prompt("Input a positive integer", "Type a number"
            );

        //using parseFloat function to make string to number
        //using Number.isInteger to check number
        if(num > 0 && Number.isInteger(parseFloat(num))){
            break;
        }

        alert("Input number is not a positive integer");
    }

    //find factors
    var i = num;
    var arr = [];
    while(i != 1){
        var j = 2;
        while(true){
            if(i%j == 0){
                arr.push(j);
                i /= j;
                break;
            }
            j++;
        }
    }

    //sort array by descending order
    arr.sort(function(a,b){return b-a});
    //print the result
    document.write(num+", "+ arr.join("*"));
</script>
```

Result

localhost 내용:

Input a positive integer

1800

확인   취소

1800, 5*5*3*3*2*2*2