Ejercicio 1:

```
const numbers = [1, 2, 3, 4, 5, 6, 7, 8,
    9, 10, 11, 12, 13, 14, 15, 16, 17];

const filterPair = arr => {
    const filtered = arr.filter(el => el % 2 === 0);
    return filtered;
};

const isPrime = n => {
    if (n === 1) {
        return false;
    } else if (n === 2) {
        return true;
    } else {
        for (let x = 2; x < n; x++) {
            if (n % x === 0) {
                return false;
            }
        }
        return true;
    };
};

const filterPrime = arr => {
    const filtered = arr.filter(el => isPrime(el));
    return filtered;
};

const filterMultiples = arr => {
    const filtered = arr.filter(el => (el % 3 === 0) && (el !== 0));
    return filtered;
};


console.log("Imprimiendo números pares..");
console.log(filterPair(numbers));

console.log("\n\nImprimiendo números primos...");
console.log(filterPrime(numbers));

console.log("\n\nImprimiendo múltiplos de 3");
console.log(filterMultiples(numbers));
```

```
D:\TRABAJOS\UNIVERSIDAD\CURSOS\DE
Imprimiendo números pares..
[
   2,  4,  6,  8,
  10, 12, 14, 16
]


Imprimiendo números primos ...
[
   2,  3,  5, 7,
  11, 13, 17
]


Imprimiendo múltiplos de 3
[ 3, 6, 9, 12, 15 ]
```

Ejercicio 2:

```
const pizzas = [
    {
        name: 'Napolitana',
        toppings: ['cheese', 'sauce', 'pepperoni   '],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'American  ',
        toppings: ['cheese', 'two hams', 'pepperoni'],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'Hawain    ',
        toppings: ['cheese', 'sauce', 'pineapple   '],
        crust: 'deep dish',
        serves: 3
    },
    {
        name: 'Mix       ',
        toppings: ['cheese', 'sauce', 'ham', 'bacon   '],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'National  ',
        toppings: ['cheese', 'sauce', 'bacon', 'garlic'],
        crust: 'deep dish',
        serves: 1
    },
];

console.log("Imprimiendo datos de las pizzas");
console.log("\nName\t\tToppings\t\tCrust  \tServes\n");

var values_total = [];
var keys = Object.keys(pizzas[0]);
for (var i = 0; i < pizzas.length; i++){
    var values = Object.keys(pizzas[i]).map(function(key){
        return pizzas[i][key];
    });
    values_total.push(values);
}


for (var i = 0; i < values_total.length; i++) {
    for (var j = 0; j < values_total[0].length; j++) {
        process.stdout.write(values_total[i][j] + "  ");

    }
    process.stdout.write("\n");

}
```

```
Imprimiendo datos de las pizzas

Name            Toppings                 Crust   Serves

Napolitana  cheese,sauce,pepperoni     deep dish  2
American    cheese,two hams,pepperoni  deep dish  2
Hawain      cheese,sauce,pineapple     deep dish  3
Mix         cheese,sauce,ham,bacon     deep dish  2
National    cheese,sauce,bacon,garlic  deep dish  1
```

Ejercicio 3:

```
const pizzas = [
    {
        name: 'Napolitana',
        toppings: ['cheese', 'sauce', 'pepperoni'],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'American  ',
        toppings: ['cheese', 'two hams', 'pepperoni'],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'Hawain    ',
        toppings: ['cheese', 'sauce', 'pineapple'],
        crust: 'deep dish',
        serves: 3
    },
    {
        name: 'Mix       ',
        toppings: ['cheese', 'sauce', 'ham', 'bacon'],
        crust: 'deep dish',
        serves: 2
    },
    {
        name: 'National  ',
        toppings: ['cheese', 'sauce', 'bacon', 'garlic'],
        crust: 'deep dish',
        serves: 1
    },
];

console.log("Imprimiendo datos de las pizzas filtradas");
console.log("\nName\t\tToppings\t\tCrust  \tServes\n");

var values_total = [];
var keys = Object.keys(pizzas[0]);
for (var i = 0; i < pizzas.length; i++) {
    var values = Object.keys(pizzas[i]).map(function (key) {
        return pizzas[i][key];
    });
    values_total.push(values);
}


for (var i = 0; i < values_total.length; i++) {
    for (var j = 0; j < values_total[0].length; j++) {
        if (values_total[i][1].includes("pepperoni")) {
            process.stdout.write(values_total[i][j] + "   ");
        } else {
            continue;
        }


    }
    process.stdout.write("\n");

}
```

```
Imprimiendo datos de las pizzas filtradas

Name            Toppings                  Crust   Serves

Napolitana  cheese,sauce,pepperoni  deep dish  2
American    cheese,two hams,pepperoni  deep dish  2
```

Ejercicio 4:

```
class Pizza {
    constructor(name, toppings, crust, serves, variant) {
        this.name = name;
        this.toppings = toppings;
        this.crust = crust;
        this.serves = serves;
        this.variant = variant;
    }
}
class Pizza {
    constructor(name, toppings, crust, serves, variant) {
        this.name = name;
        this.toppings = toppings;
        this.crust = crust;
        this.serves = serves;
        this.variant = variant;
    }
}


const pizzas = [
    [
        'Napolitana',
        ['cheese', 'sauce', 'pepperoni'],
        'deep dish',
        2
    ],
    ...
];

console.log("Creando variante Regular...");
var regular = [];
for (var i = 0; i < pizzas.length; i++) {
    const pizzaRegular = new Pizza(
        pizzas[i][0],
        pizzas[i][1],
        pizzas[i][2],
        pizzas[i][3],
        "regular"
    );
    regular.push(pizzaRegular);
    delete(pizzaRegular);
}

console.log(regular);

...
```

```
Creando variante Regular ...
[
  Pizza {
    name: 'Napolitana',
    toppings: [ 'cheese', 'sauce', 'pepperoni' ],
    crust: 'deep dish',
    serves: 2,
    variant: 'regular'
  },
  Pizza {
    name: 'American',
    toppings: [ 'cheese', 'sauce', 'pepperoni' ],
    crust: 'deep dish',
    serves: 3,
    variant: 'regular'
  },
  Pizza {
```

Ejercicio 5-a:

```js
const arr = [1, 2, 3, 4, 5];

var funcMap = x =>{
    return x**2;
}

var funcSum = (a, b) => {
    return a + b;
}


const sumPower = arr.map(funcMap).reduce(funcSum);

console.log("\nEn el arreglo..");
console.log(arr);
console.log("\nEl resultado de la suma de cuadrados es " + sumPower + "\n");
```

```
En el arreglo..
[ 1, 2, 3, 4, 5 ]

El resultado de la suma de cuadrados es 55
```

Ejercicio 5-b:

```
const arr = [2, 22, 1, -2, 23, -4];

var funcMap = x =>{
    if (x >= 0) {
        return 1;
    } else {
        return 0;
    }

}

var funcSum = (a, b) => {
    return a + b;
}


const possitivesCounted = arr.map(funcMap).reduce(funcSum);

console.log("\nEn el arreglo..");
console.log(arr);
console.log("\nHay " + possitivesCounted + " positivos\n");
```

```
En el arreglo..
[ 2, 22, 1, -2, 23, -4 ]

Hay 4 positivos
```

Ejercicio 5-c:

```
const matrix = [
    [1, 2],
    [3, 4],
    [5, 6],
    [7, 8, 9]];

//var merged = [].concat.apply([], matrix);

var merged = matrix.reduce(function(a, b){
    return a.concat(b);
}, []);

console.log("Imprimiendo matriz..\n");
console.log(matrix);

console.log("\nImprimiendo matriz aplanada...\n");
console.log(merged);
```

```
Imprimiendo matriz..

[ [ 1, 2 ], [ 3, 4 ], [ 5, 6 ], [ 7, 8, 9 ] ]

Imprimiendo matriz aplanada ...

[
  1, 2, 3, 4, 5,
  6, 7, 8, 9
]
```