1. Write a JS program to find the power of a number using for loop.

Answer:

```
var base = parseInt(prompt('Type the base number'));
var exponent = parseInt(prompt('Type the exponent'));
x = base
for (let i = 1; i != exponent; i++) {
base = base * x;
}
```

---

2. Write a JS program to create this pattern given a number.
e.g. input is 8.

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
1 2 3 4 5 6
1 2 3 4 5 6 7
1 2 3 4 5 6 7 8
```

Answer:

```
var x = parseInt(prompt('Type a positive number'));
var y = 0; //counter
var z = '';
var a = 1;
while (y != (x+1)) {
console.log(z);
z = (z) + (a);
a++;
y++;
}
```

---

3. Write a JS program to print the Fibonacci series for a given value of N using for, while, and do-while loops.

Answer:
No answer

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4. Write a JS program to find N value in the Fibonacci series for a given number
e.g. N = 5

print out the 5th value in the sequence

Answer:
No answer

---

5. Write a JS program to find the Armstrong numbers of 3 digits. An Armstrong number of three digits is an integer such that the sum of the cubes of its digits is equal to the number itself. For example, 371 is an Armstrong number since 3**3 + 7**3 + 1**3 = 371.

Answer:

```
var a = parseInt(prompt('Type the first number: '));
var b = parseInt(prompt('Type the second number: '));
var c = parseInt(prompt('Type the third number: '));
x = a * a * a;
y = b * b * b;
z = c * c * c;
armstrong = x + y + z;
console.log(armstrong);
```

---

6. Write a JS program to compute the greatest common divisor (GCD) of two positive integers.

Answer:

```
var a = parseInt(prompt('Type the first number'));
var b = parseInt(prompt('Type the second number'));
var z = 0; //container
if (a > b) {
z = a;
} else {
z = b;
}
while (z != 0) {
   if (a % z === 0 && b % z === 0) break;
   z--;
}
console.log(z);
```

7. Write a JS program to sum the multiples of 3 and 5 under 1000.

Answer (copied only from web):
Source: https://www.w3resource.com/javascript-exercises/javascript-conditional-statements-and-loops-exercise-12.php

```
var sum = 0;
for (var x = 0; x < 1000; x++)
{
  if (x % 3 === 0 || x % 5 === 0)
  {
    sum += x;
  }
}
console.log(sum);
```

---

8. Write a JavaScript conditional statement to sort three numbers. Display an alert box to show the result.
e.g. 4,9,1
output: 1, 4, 9

Answer:

```
var a = parseInt(prompt('Type the first number: '));
var b = parseInt(prompt('Type the second number: '));
var c = parseInt(prompt('Type the third number: '));
if ((a < b) && (a < c) && (b < c)) {
  alert(a + ' ' + b + ' ' + c);
} else if ((a < b) && (a < c) && (c < b)) {
  alert(a + ' ' + c + ' ' + b);
} else if ((b < a) && (b < c) && (a < c)) {
  alert(b + ' ' + a + ' ' + c);
} else if ((b < a) && (b < c) && (c < a)) {
  alert(b + ' ' + c + ' ' + a);
} else if ((c < a) && (c < b) && (a < b)) {
  alert(c + ' ' + a + ' ' + b);
} else if ((c < a) && (c < b) && (b < a)) {
  alert(c + ' ' + b + ' ' + a);
}
```

9. Write a JS program to find the factorial of a number.
e.g. 5
output: 120

Answer:

```
var input = parseInt(prompt('Type a positive number: '));
var counter = 1
var container = 1
while (counter <= input) {
   container = container * counter;
   counter++;
}
   console.log(container);
```

---

10. Write a JS program that will allow someone to guess a four-digit pin exactly 4 times. If the user guesses the number correctly, it prints “That was correct!” Otherwise, it will print “Sorry that was wrong.” The program stops after the 4th attempt regardless if they got it right or wrong. Consider the 4-digit PIN to be a variable.

Answer:

```
var a = parseInt(prompt('Type your 4-digit pin:'));
var count = 0;
var pass = 8888;
while (count != 3) {
   if (a === pass) break;
   a = parseInt(prompt('Sorry that was wrong'));
   count++;
}
   alert('That was correct!');
```