

1. Reading the following statements, please indicate which information will be printed on the screen.

```
<html>
<script type="text/javascript">
  var numLlamadas = 0;
  function calculaBinomio(a, b)
  {
    var cuadradoDeA = a*a;
    var cuadradoDeB = b*b;
    numLlamadas++;
    return cuadradoDeA + cuadradoDeB + 2*a*b;
  }
  alert(calculaBinomio(2, 3));
  alert(calculaBinomio(4, 5));
  alert(numLlamadas);
  alert(typeof(cuadradoDeA));
</script>
</html>
```

For all information to be printed on the screen, the alert() function will be used.

This function generates a popup window with the information it receives as a parameter.

Below I will indicate what information will be displayed on the screen, in order, and with a short explanation.

1. "25"

The first alert will have as information "25" since it is passed as parameter `calculaBinomio(2, 3)`, which is a function that will return $4 + 9 + 2 \times 2 \times 3 = 25$ ($2 \times 2 + 3 \times 3 + 2 \times 2 \times 3$).

```
alert(calculaBinomio(2, 3));
```

2. "81"

The second alert will have as information "81" since it is passed as parameter `calculaBinomio(4, 5)`, which is a function that will return $16 + 25 + 2 \times 4 \times 5 = 81$ ($4 \times 4 + 5 \times 5 + 2 \times 4 \times 5$).

```
alert(calculaBinomio(4, 5));
```

3. "2"

The third alert will have as information "2" since it is passed as parameter `numLlamadas`, which is a variable that is initialized in 0, and will be used to count the number of times that the function `calculatesBinomial()` is called. For each call to the function, the variable `numLlamadas` is incremented by 1.

```
alert(numLlamadas);
```

* Explain in detail the 4th output: `alert(typeof cuadradoDeA);`

4. "undefined"

The fourth alert will have as information "undefined".

This is because it is passed as a `typeof(cuadradoDeA)` parameter, and `typeof()` is used to get the data type corresponding to the element it receives as a parameter.

In this case, we are passing as parameter the variable `cuadradoDeA`, which is a variable that is defined inside the function `calculaBinomio()`, and has scope only inside this function. Outside of it, the variable will be considered as undefined, so it is the result that is obtained.