

Challenge: Recursive Powers

Write a recursive function **power(x, n)** that returns the value of x^n (assume that **n** is an integer). Here are the 4 following cases that you need to handle.

1. Base Case

Start by writing the base case. $x^0 = 1$ for any value of **x**.

2. Recursive case: n is odd

In this step, write the recursive case for which **n** is odd. Assume you have a function `isOdd()` to check if **n** is odd.

3. Recursive case: n is even

In this step, write the recursive case for which **n** is even. Assume you have a function `isEven()` to check if **n** is even.

4. Recursive case: n is negative

In this step, write the recursive case for which **n** is negative. Compute **x** raised to **-n** recursively, and return the reciprocal of that number.

 Python

 C++

 JS

```
def power(x, n):  
    # base case  
  
    # recursive case: n is negative  
  
    # recursive case: n is odd  
  
    # recursive case: n is even  
    return None
```



