**Practice Problems**

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**1 Solved Out Problems**

Q. The function is even or odd.

Solution:

*If n = Even Integer*

, therefore, we can say that x raised to the power of even integers will be even functions

*If n = Odd Integer*

, therefore, we can say that x raised to the power of odd integers will be odd functions

Q. , find .

Solution:

Q. , find

Solution:

Q. Find the range and domain of

Solution:

For finding range, we will have to evaluate the possible values of y.

For finding domain, we will have to evaluate the possible values of x.

So, the critical values will be -3 and -6.

Plotting them on the number line,

we can see, that on putting values greater than -3, in the equation y = f(x), the value of the equation turns out to be positive.

On putting values between -3 and -6, in the equation y = f(x), the value of the equation turns out to be negative.

On putting values less than -6, in the equation y = f(x), the value of the equation turns out to be positive.

So, the values of x, for which the equation is positive is

Critical Points are ½ and 1.

Plotting them on the number line,

we can see, that on putting values greater than 1, in the equation x = f(y), the value of the equation turns out to be negative.

On putting values between ½ and 1, in the equation x = f(y), the value of the equation turns out to be positive.

On putting values less than ½ , in the equation x = f(y), the value of the equation turns out to be negative.

So, the values of y, for which the equation is positive is

So, Domain will be

and range will be

**2 Try it Yourself Problems**

Q. The function, , is even or odd?

Q. , find and .

Q. Find the range and domain of