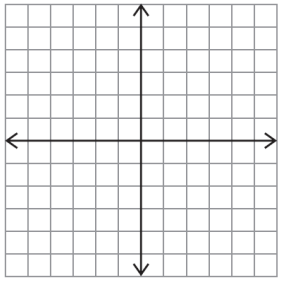
Name: _____ Period: ___ Due Date: March 4, 2019

(MATH 4/5 H)

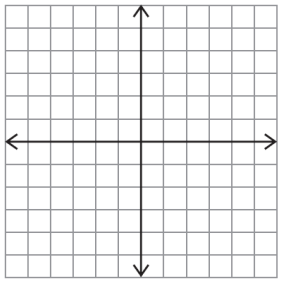
Power & Polynomial Functions Homework #6

Directions: Sketch a graph of each of the following functions and identify the end behaviors.

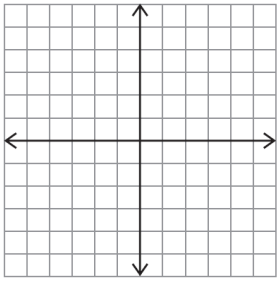
1. $f(x)=x^{29}$



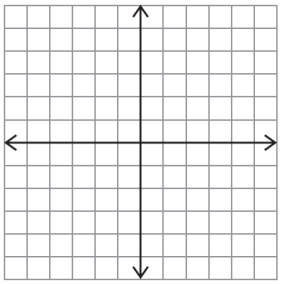
2. $g(x)=x^{10}$



3. $h(x)= -x^{13}$

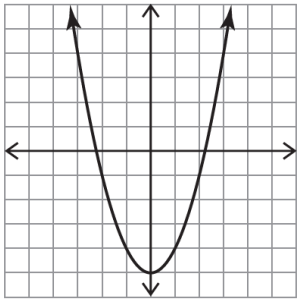


4. $j(x)= -x^{12}$



Directions: Determine the type of symmetry of the function below (even/odd) and explain your reasoning.

1.



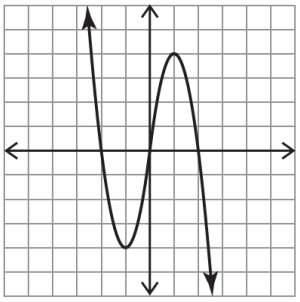
The function above is an _____

function because _____

_____.

2. $m(x)=x^2+x+1$

3.



The function above is an _____

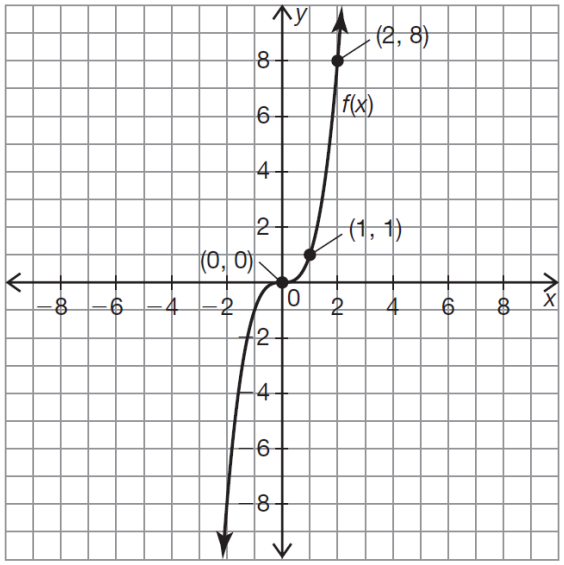
function because _____

_____.

4. $n(x)= - x^4+x^2+2$

Directions: Graph the transformations of the power functions and describe the transformations.

1. g(x)= -f(x+1)



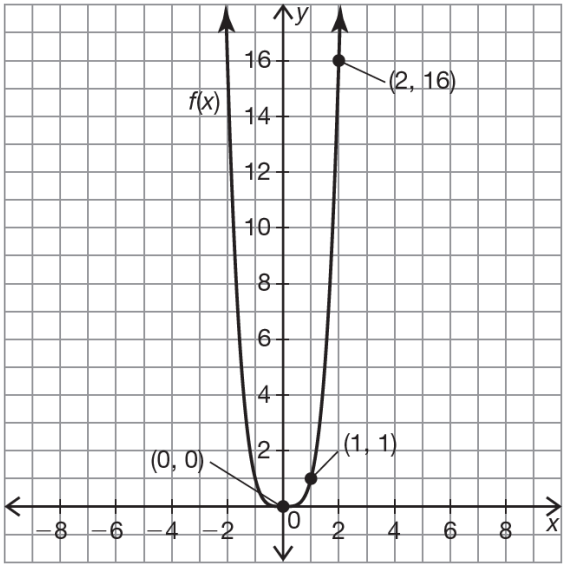
f(x) was _____

_____

_____

_____ to get g(x).

2. k(x)=½f(-x)+2



f(x) was _____

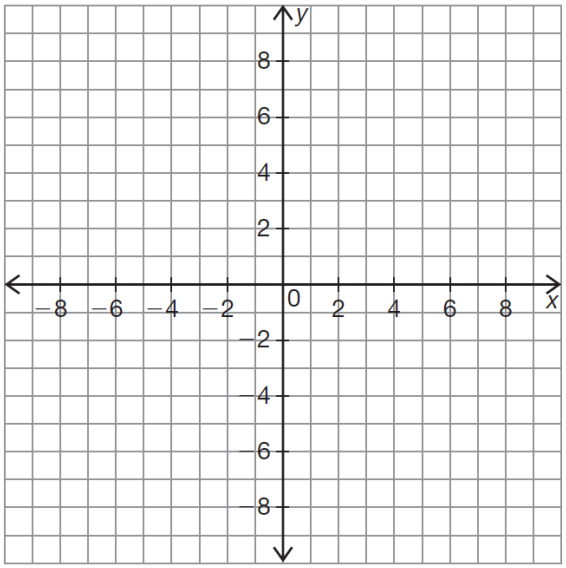
_____

_____

_____ to get g(x).

Directions: Sketch a graph of each of the functions given the characteristics.

1. f(x) is a negative degree 5 function that has a y-intercept at y=2 and x-intercepts at x=4, x=2, x=-3, x=7, and x=-1.



2. g(x) is an even degree function that has an absolute maximum at (2,6) and x-intercepts at x=1 and x=-1.