EVEN ODD NEITHER

Name:_____

Period: _____ Date:_____

How do you determine if a graph represents a function that is ***even, odd*** or ***neither?***

Even Functions

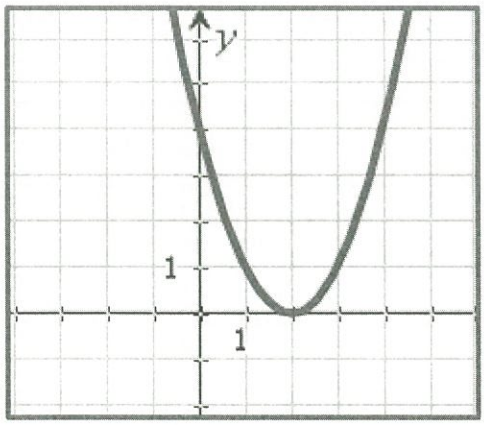
Symmetric about y-axis

Odd Functions

Symmetric about origin

Determine if the following graph represents an even function, an odd function or neither type of function. Explain your reasoning.

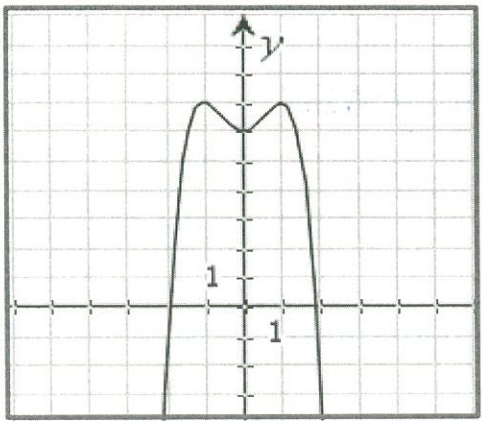
1.



Type: Even, Odd or Neither

Reasoning: No symmetry about y-axis or origin

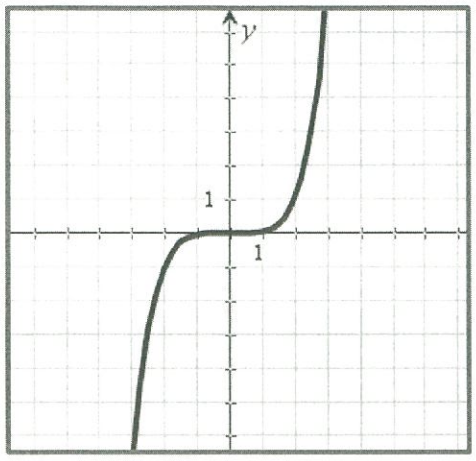
2.



Type: Even, Odd or Neither

Reasoning: Symmetric about y-axis

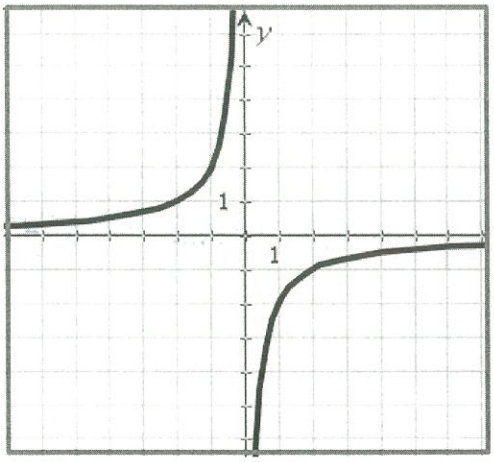
3.



Type: Even, Odd or Neither

Reasoning: Symmetric about origin

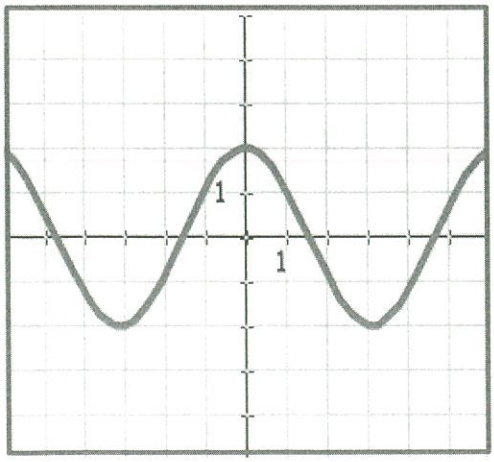
4.



Type: Even, Odd or Neither

Reasoning: Sym. about origin

5,



Type: Even, Odd r Neither

Reasoning: Symm. about y axis

Determine if the function is even, odd or either and justify your answer.

6. $f(x) = 4x^4 - 3x^2 + 9$

Even $4(-x)^4 - 3(-x)^2 + 9$

$4x^4 - 3x^2 + 9$

7. $f(x) = 7x - 0.5$

Neither

$7(-x) - 0.5$

$-7x - 0.5$

8. $f(x) = 8x^2 - 5|x| + 2$

Even $8(-x)^2 - 5|-x| + 2$

$8x^2 - 5|x| + 2$

9. $f(x) = 6x^7 - 4x^3 + 11x$

Odd $6(-x)^7 - 4(-x)^3 + 11(-x)$

$-6x^7 + 4x^3 - 11x$

10. $f(x) = \sqrt{7x^3 + 4x} - 2$

Neither

$\sqrt{7(-x)^3 + 4(-x)} - 2$

$\sqrt{-7x^3 - 4x} - 2$

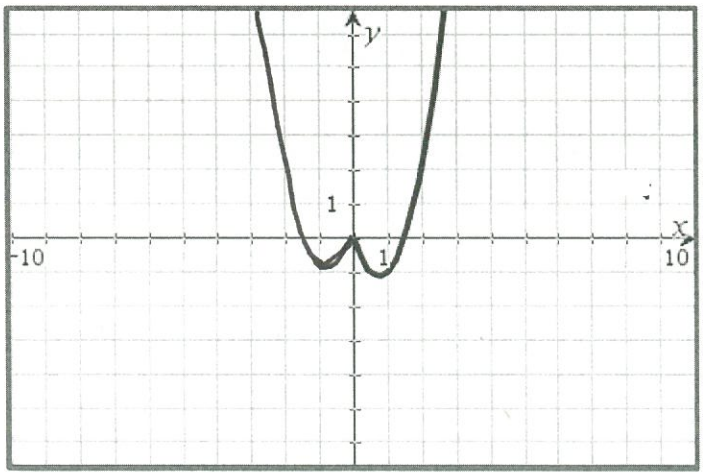
11. $f(x) = -0.6x^5 + 8x^3 - \frac{x}{3}$

Odd $-0.6(-x)^5 + 8(-x)^3 - \left(\frac{-x}{3}\right)$

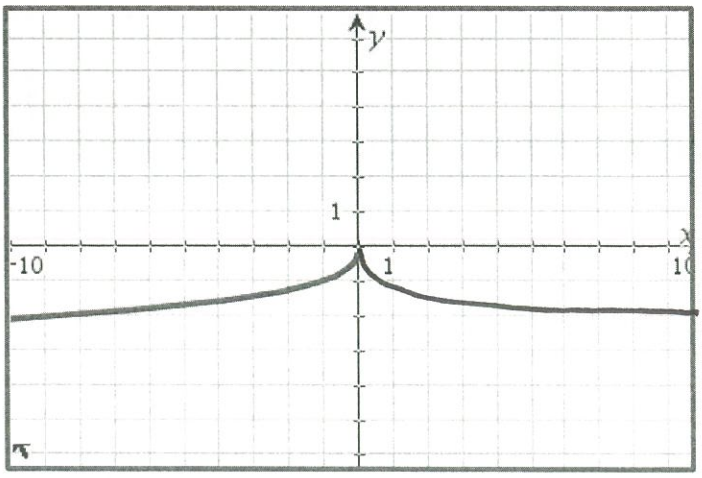
$0.6x^5 - 8x^3 + \frac{x}{3}$

Complete the graph so that the function is even.

12.

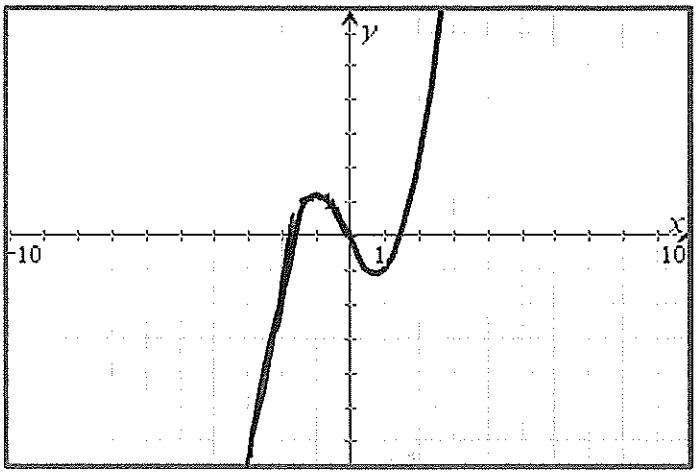


13.

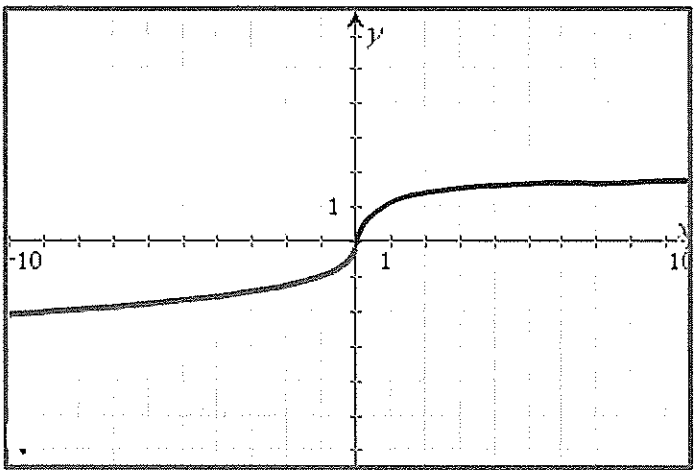


Complete the graph so that the function is odd.

14.



15.



Complete the graph so that the function is neither

16.