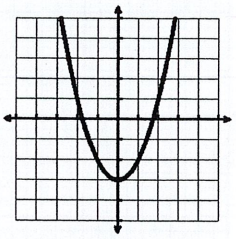
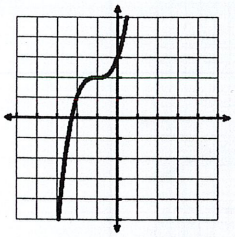
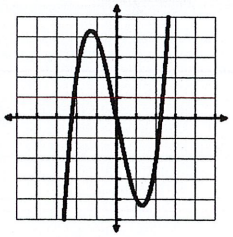
GSE Algebra I 5.1 – Homework

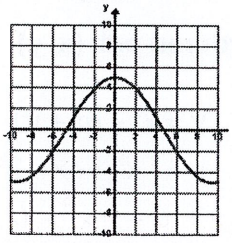
Name: Guide Date: _____

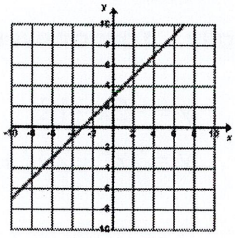
Tell whether the function is even, odd, or neither.

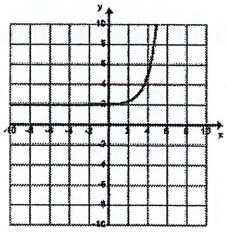
1.  E

2. 

3.  O

4. 

5.  N

6. 

7. $f(x) = x^3 - x^2$ N

8. $f(x) = -x^3 + 2x$

9. $f(x) = x^3 + 4x^1 + 1x^0$ N

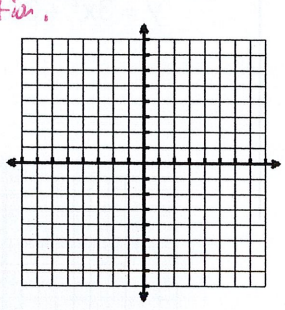
10. $f(x) = \frac{1}{2}x^4 + 9$

11. $f(x) = 5x^1 + 1x^0$ N

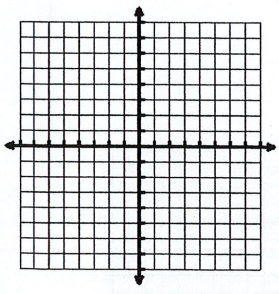
12. $f(x) = 5$

13. Can a linear function ever be even or odd? If so, sketch an example.

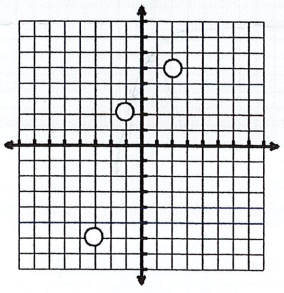
Interesting question. What do you think?



14. Can an exponential function ever be even or odd? If so, sketch an example.



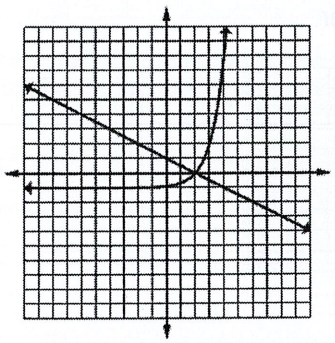
15. If the following points are on an odd function, what other points are on the function? Give the coordinates.



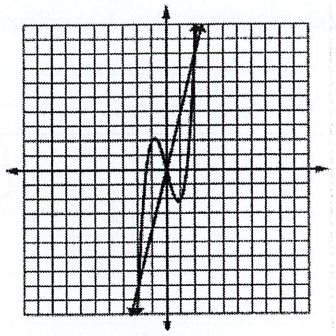
(-2, -5)
(1, -2)
(3, 6)

Find the point of intersection(s). Your answer(s) should be an ordered pair (x, y).

1. (0, 2)



2. _____
_____
_____



Find the point of intersection algebraically. Your answer should be an ordered pair (x, y).

3. $y = 3x + 4$
$y = -x + 9$

$3x + 4 = -x + 9$
$+x \quad +x$
$4x + 4 = 9$
$-4 \quad -4$
$4x = 5$
$x = \frac{5}{4}$

$y = 3(\frac{5}{4}) + 4$
$y = \frac{15}{4} + \frac{16}{4}$
$y = \frac{31}{4}$

$(\frac{5}{4}, \frac{31}{4})$

4. $y = -2x - 12$
$y = 2x^2 + 20x + 44$

5. $y = x^2 - 6x + 10$
$y = -x^2 + 4x - 2$

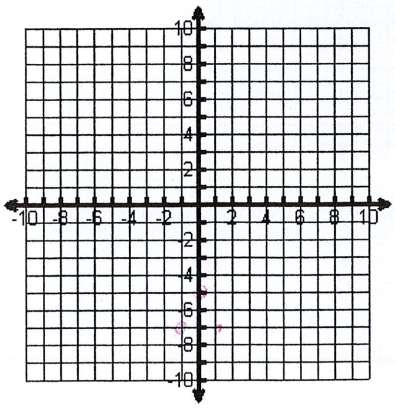
$x^2 - 6x + 10 = -x^2 + 4x - 2$
$+x^2 - 4x + 2 \quad +x^2 - 4x + 2$
$\frac{2x^2}{2} - \frac{10x}{2} + \frac{12}{2} = \frac{0}{2}$
$x^2 - 5x + 6 = 0$
$(x-2)(x-3) = 0$
$x = 2, 3$

$y = (2)^2 - 6(2) + 10$
$y = 2$
$(2, 2)$

$y = (3)^2 - 6(3) + 10$
$y = 1$
$(3, 1)$

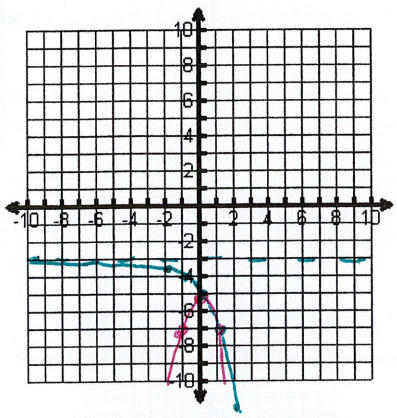
Find the point of intersection graphically. Your answer(s) should be an ordered pair (x, y).
Graph your lines on the grids below.

6. $y = 5^{x-2} + 2$
$y = 4x - 5$



7. $y = -2x^2 - 5$
$y = -2^{x+1} - 3$

(0, -5) (1, -7)



8. $y = 3x + 11$
$y = 3x^2 + 30x + 65$