math 2
unit 4 test review

Name:_____Hr:_____

Ready: For each function write the type of function, equation for the parent function, and sketch a graph of the parent function.

1. $f(x) = \sqrt{x} - 3$

2. $f(x) = |x + 2|$

3. $f(x) = x^2 + 5$

4. $f(x) = (x - 4)^3$

5. $f(x) = -x + 7$

6. $f(x) = -4\sqrt{x+1} + 2$

7. $f(x) = 2^{x-5} + 1$

8. $f(x) = 5(x-2)^2 + 4$

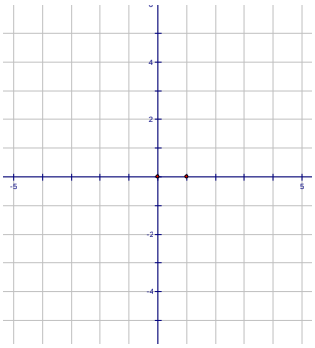
9. $f(x) = 3^{x+2} - 7$

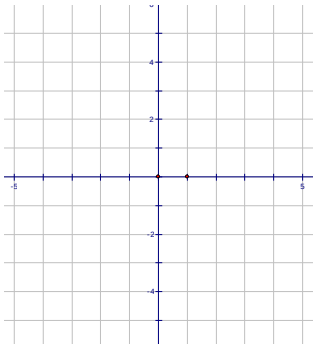
State the transformations for each function then Sketch a graph of the function. (No Calculator)

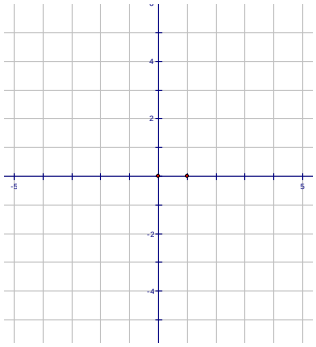
10. $f(x) = -(x-2)^2 + 1$

11. $f(x) = |x - 4| - 3$

12. $f(x) = -\sqrt{x+3}$





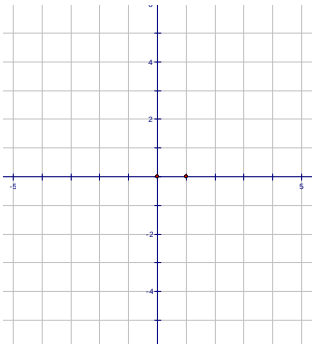


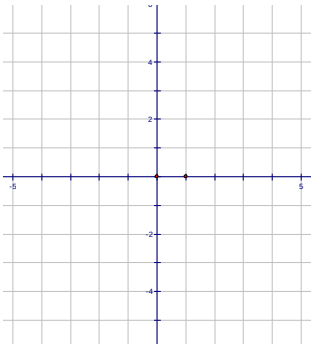
13. $f(x) = \sqrt{x} + 2$

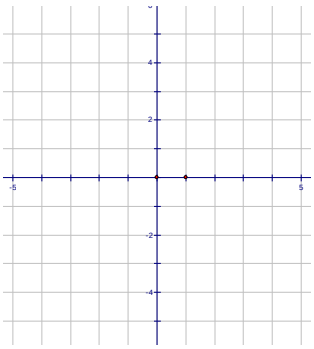
14. $f(x) = -(x + 4)^2$

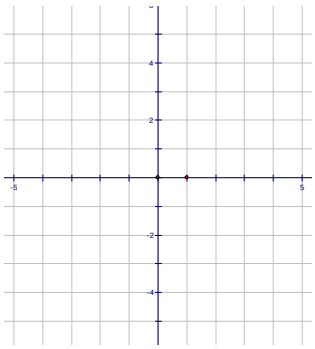
15. $f(x) = -2x - 3$

16. $f(x) = 2^{x+1}$



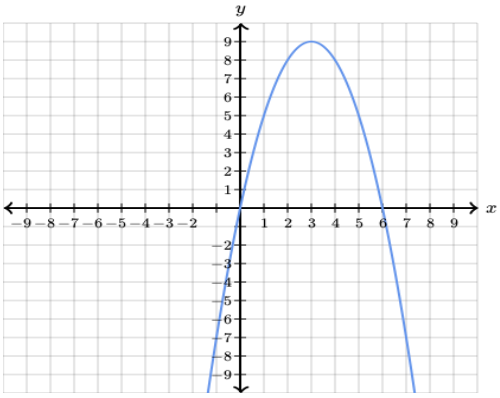






Identify the key features for the following graphs: Increasing, Decreasing, Positive, Negative, Relative Max(s), Relative Min(s), Zeroes, End Behavior, and Any Symmetry.

17.



Increasing:

Decreasing:

Positive:

Negative:

Relative Max(s):

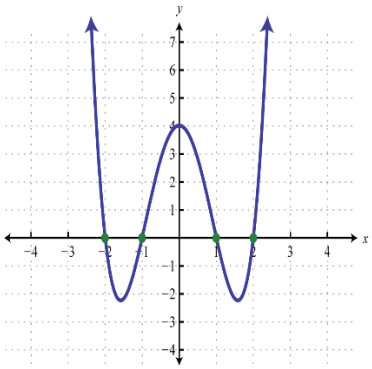
Relative Min(s):

End Behavior:

Symmetry:

EVEN or ODD or NEITHER

18.



Increasing:

Decreasing:

Positive:

Negative:

Relative Max(s):

Relative Min(s):

End Behavior:

Symmetry:

EVEN or ODD or NEITHER

19. List the following from greatest (1) to least (4), according to the rate of change.

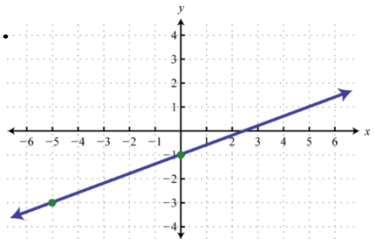
a.

x	y
0	3
2	11
4	19
6	27
8	35

b. The output is equal to 3 times plus 1 of the input

c. $f(x) = -7x - 1$

d.



_____ _____ _____ _____

Find the inverses for the following

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

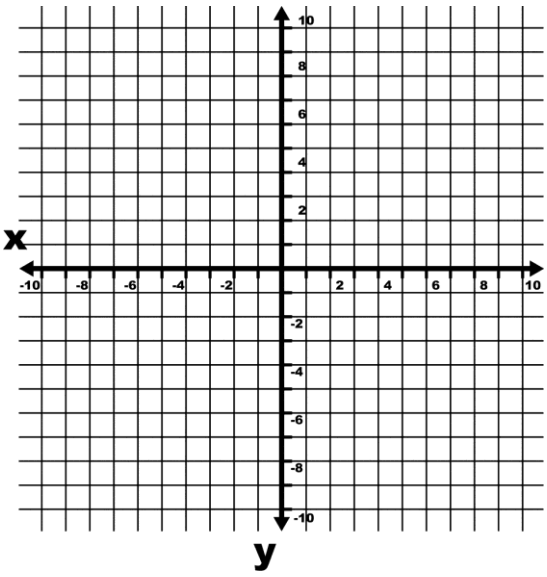
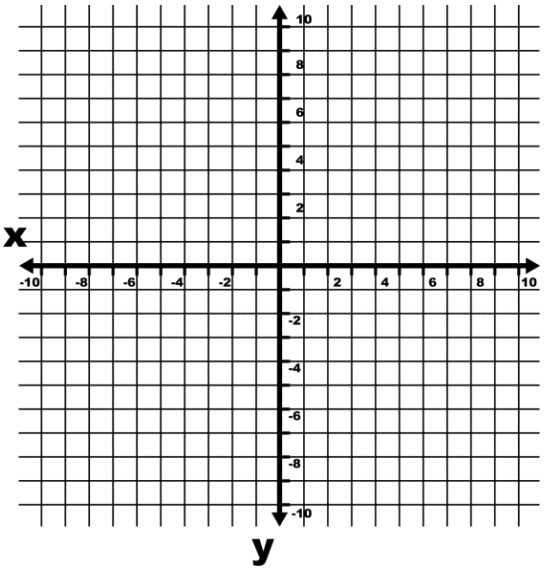
21. $f(x) = \frac{2}{x-8}$

22. $f(x) = \frac{1}{2}x^3$

23. $y = -2(x+5)^2$

Find the inverse and graph the function and it's inverse on a graph

24. $y = \frac{2x-5}{3}$



35. $f(x) = -2x + 7$