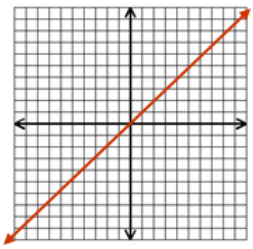
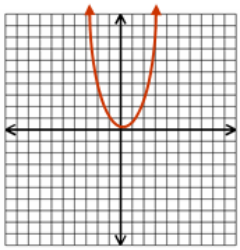
MMA UNIT 3-1 Parent Function Review Name _____Pd____

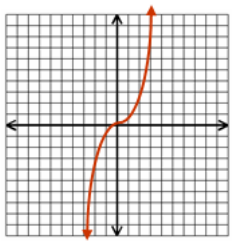
Match the name & equation to the graph.

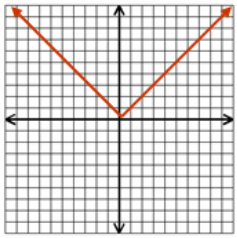
Names: A) absolute value B) cubic C) linear D) quadratic E) radical

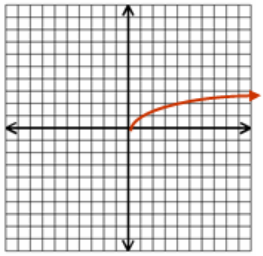
Equations: F) y = x G) $y = x^2$ H) $y = x^3$ I) y = |x| J) $y = \sqrt{x}$

1. 

2. 

3. 

4. 

5. 

$$y = a(x-h)^2 + k$$

_____11) describe the effect of **a** on the graph.

_____12) describe the effect of **h** on the graph.

_____13) describe the effect of **k** on the graph.

Identify the parent function name and describe the transformation for each function.

6. $g(x) = 3(x-1)^2 - 6$ Name:_____

Transformation: 1)_____2)_____3)_____

7. $f(x) = 5(x-2)^3 - 11$ Name:_____

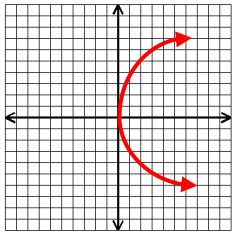
Transformation: 1)_____2)_____3)_____

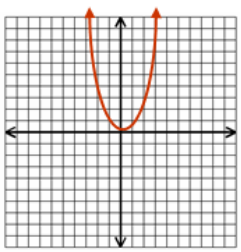
8. $h(x) = \frac{2}{3}|x+6|$ Name:_____ Transformation 1)_____2)_____

9. $f(x) = x + 6$ Name:_____ Transformation 1)_____

10. What is the effect on the graph of the function $y = x^2 + 2$ when it is changed to $y = x^2 - 3$?_____

Is it a function? 11-14





x	y
-13	-1
-5	0
-2	2
0	2
1	5

x	y
-1	-1
0	0
1	1
2	2
4	5
4	7

Is It Linear, Quadratic, or Neither?

15.

Road Trip Distance Traveled	
gallons	miles
8.7	263
9.8	296
10.1	324
10.1	305
10.6	332
11.2	338
12.3	368

16.

My Heating Bills	
Temp	Amount ($)
36	83
38	91
38	99
42	107
42	115
44	123
49	131

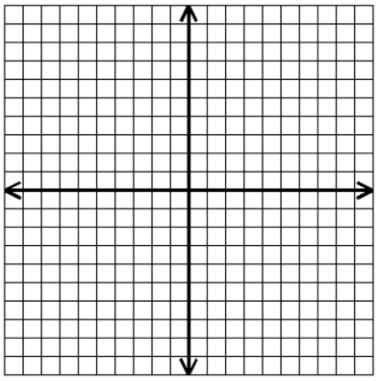
17.

x	y
-3	10
-1	-8
1	6
3	52

Name the Parent Function. List the transformations. Graph each equation.

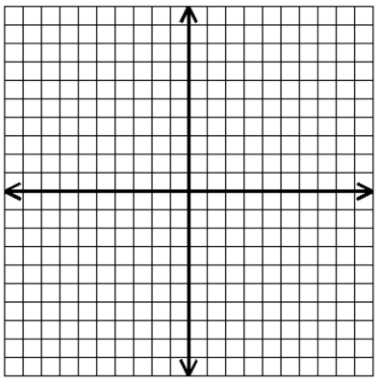
18. $y = (x + 2)^2 - 3$

1)



2)

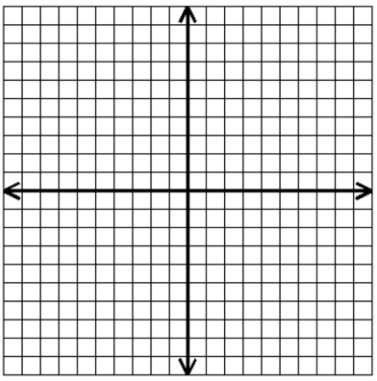
19. $y = 2|x - 3| + 2$ 1)



2)

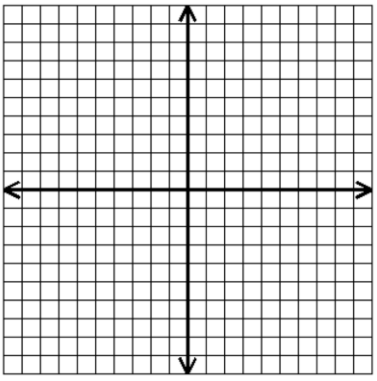
3)

20. y = - 4x + 5 1)



2)

21. $y = \sqrt{x + 5}$ 1)



_____22) Jimmy takes 5 naps per day. Is this statement Linear or Quadratic?

_____23) Steven shoots a rocket from the ground.
Is this statement Linear or Quadratic?