

OBJECTIVE 2: Finding Square Roots of Numbers

- Parent function: $f(x) = \sqrt{x}$
- The opposite of squaring a number is taking the square root of a number
- The index, if missing, defaults to a 2, which is why it is called a square root

TASK 1: Find the square roots. Always check on the calculator.

a) $\sqrt{9}$ $\sqrt{3 \cdot 3}$ $\boxed{3}$

b) $\sqrt{25}$ $\sqrt{5 \cdot 5}$ $\boxed{5}$

c) $\sqrt{\frac{1}{4}} = \frac{\sqrt{1}}{\sqrt{4}} = \frac{1}{2}$ $\boxed{\frac{1}{2}}$

d) $-\sqrt{36}$ $-\sqrt{6 \cdot 6}$ $\boxed{-6}$

e) $\sqrt{-36}$ $\sqrt{i \cdot 6 \cdot 6}$ $\boxed{6i}$

f) $\sqrt{0}$ $\sqrt{0 \cdot 0}$ $\boxed{0}$

OBJECTIVE 2: Graphing Nonlinear Functions

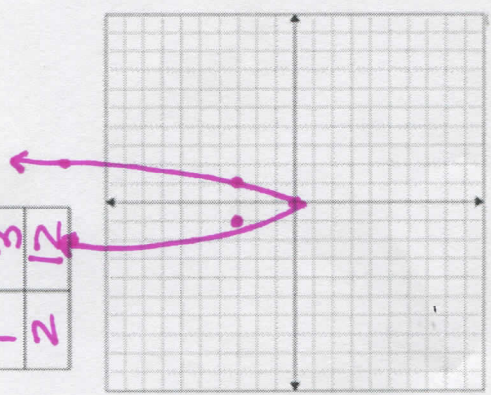
STEPS:

1. Solve the equation for y.
2. Type it into y = on your calculator
3. Go to the graph to get a visual
4. Go to the table (2nd Graph) and write down 5 strategic coordinates
5. Graph those points
6. Connect the dots and add arrows to the ends

TASK 3: Graph the functions provided. List your points you used in a table.

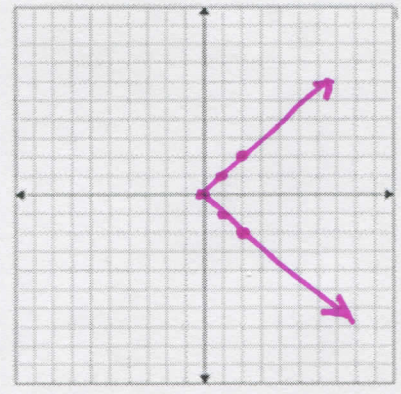
a) $f(x) = 3x^2$

x	y
-2	12
-1	3
0	0
1	3
2	12



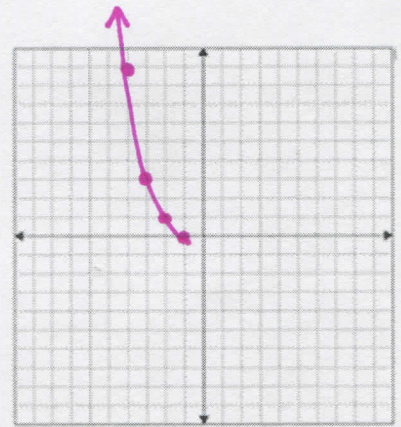
b) $f(x) = -|x|$

x	y
-2	-2
-1	-1
0	0
1	-1
2	-2



c) $f(x) = \sqrt{x} + 1$

x	y
0	1
1	2
4	3
9	4
16	5



Reminders to myself for this lesson:

pick x-values strategically

Still need help with: