hw-15-graphs-of-basic-functions

Due: **12/13/2015 at 06:00am EST.**

Students will be able to:

- Determine Coordinates of a Graph
- Create Table of Values for a Basic Graphs
- Analyze a Basic Graph

Functions and symbols that WeBWorK understands.

Links to some useful WeBWorK pages for students

1. (1 pt) Use

$f(x) = 3x^2 + 9x$

to answer the following questions:

1. Is point $(3, 55)$ on the graph of $y = f(x)$?

Your answer: [?]

2. If $x = 4$, what is $f(x)$? What point is on the graph of f?

$f(x) =$ _____,

the point on the graph is _____.

3. If $f(x) = 30$, what is x? What point(s) are on the graph of f?

$x =$ _____,

the point(s) on the graph are _____.

4. What is the domain of f?

The domain of f is _____

5. Find the $y-$intercepts of the graph of $y = f(x)$.

$y-$ intercepts are at point(s) _____

6. Find the $x-$ intercepts of the graph of $y = f(x)$.

$x-$ intercepts are at point(s) _____

2. (1 pt) In this problem you will work on graphing function $f(x) = |x|$.

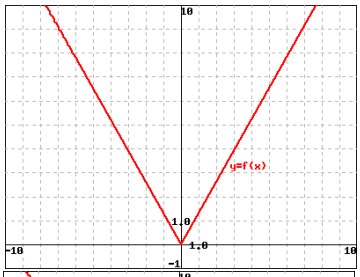
First you will find some points on the graph of $y = |x|$

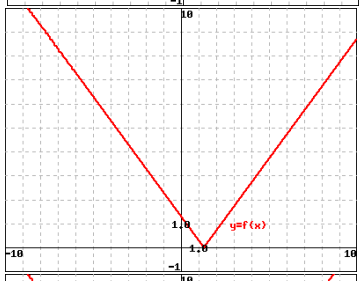
x	y
0	___
1	___
-1	___
2	___
-2	___
5	___
-5	___
9	___
-9	___

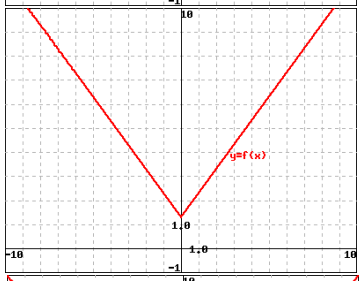
Next you will plot the points you found above, and draw a line through the points.

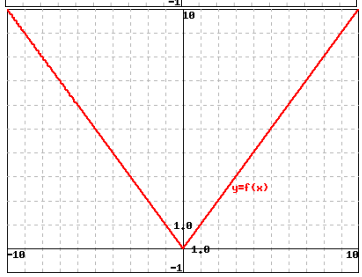
Now, select the correct graph from the list below:

The graph of $y = |x|$ matches...

- A. 

- B. 

- C. 

- D. 

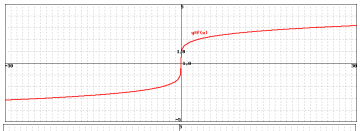
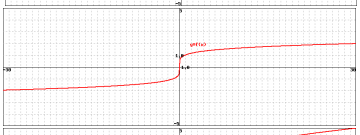
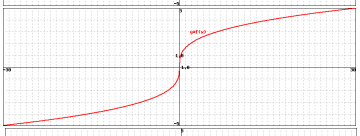
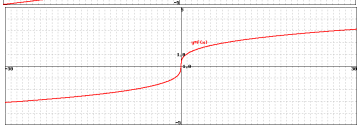
3. (1 pt) In this problem you will work on graphing function $f(x) = \sqrt[3]{x}$.

First you will find some points on the graph of $y = \sqrt[3]{x}$

x	y
0	___
1	___
-1	___
5	___
-5	___
8	___
-8	___
15	___
-15	___
27	___
-27	___

Next you will plot the points you found above, and draw a line through the points.

Now, select the correct graph from the list below:
The graph of $y = \sqrt[3]{x}$ matches...

- A. 
- B. 
- C. 
- D. 

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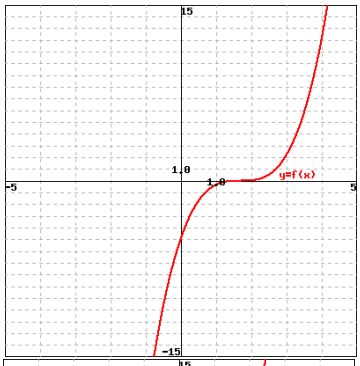
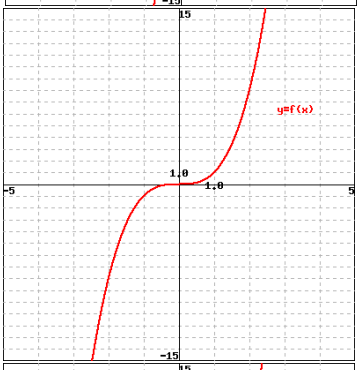
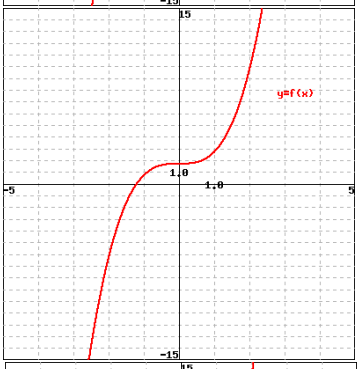
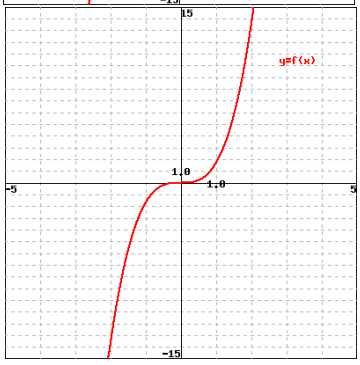
4. (1 pt) In this problem you will work on graphing function $f(x) = x^3$.

First you will find some points on the graph of $y = x^3$

x	y
0	___
1	___
-1	___
2	___
-2	___
3	___
-3	___
4	___
-4	___

Next you will plot the points you found above, and draw a line through the points.

Now, select the correct graph from the list below:
The graph of $y = x^3$ matches...

- A. 
- B. 
- C. 
- D. 

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5. (1 pt) In this problem you will work on graphing function $f(x) = x^2$.

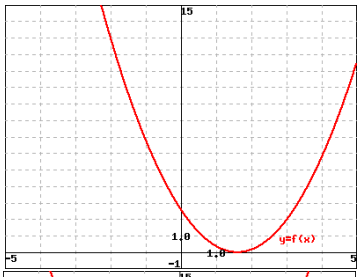
First you will find some points on the graph of $y = x^2$

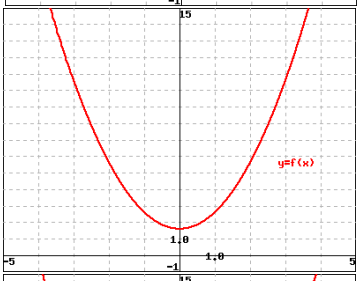
x	y
0	___
1	___
-1	___
2	___
-2	___
3	___
-3	___
4	___
-4	___

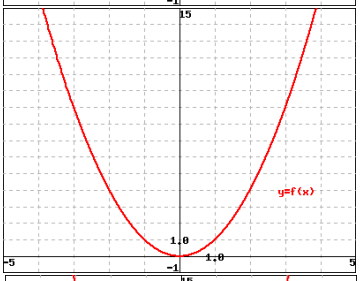
Next you will plot the points you found above, and draw a line through the points.

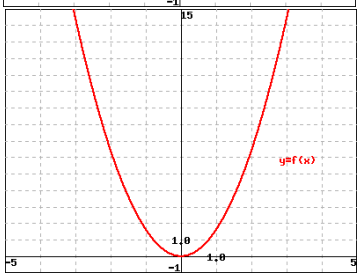
Now, select the correct graph from the list below:

The graph of $y = x^2$ matches...

- A. 

- B. 

- C. 

- D. 

6. (1 pt) In this problem you will work on graphing function $f(x) = \sqrt{x}$.

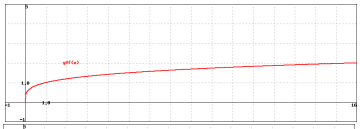
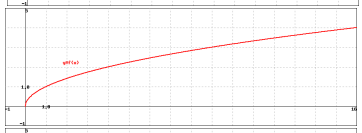
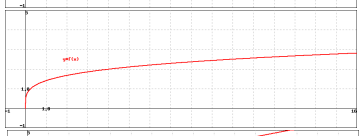
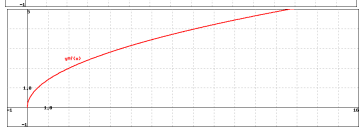
First you will find some points on the graph of $y = \sqrt{x}$

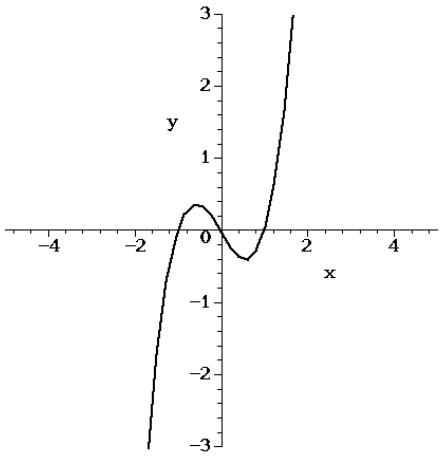
x	y
0	___
1	___
4	___
5	___
9	___
10	___
15	___
16	___

Next you will plot the points you found above, and draw a line through the points.

Now, select the correct graph from the list below:

The graph of $y = \sqrt{x}$ matches...

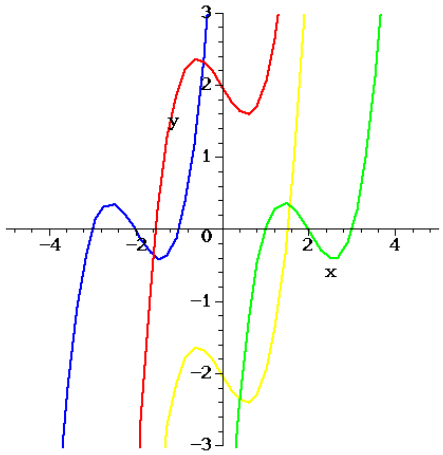
- A. 
- B. 
- C. 
- D. 



7. (1 pt)

The Figure above shows the graph of the mystery function $y = f(x)$.

In the Figure below, match the colors of the graphs in this Figure with the functions given. Enter y for yellow, b for blue, r red,and g for green, as appropriate.



A. ___ $y = f(x) + 2$
B. ___ $y = f(x) - 2$
C. ___ $y = f(x + 2)$
D. ___ $y = f(x - 2)$