$\qquad$

## Worksheet: Graphing Functions

## GUIDELINES FOR GRAPHING

- The goal is to graph enough points so that you can see the $\qquad$ of the graph. Different types of equations have different types of graphs.
- Each row of the table corresponds to a point on the graph. The " $x$ " is obviously $x$, and the $\qquad$ .
- If the inputs are not already given, you may pick them yourself. It is a good idea to pick positives and negatives.
- Unless I specify otherwise, graph $\qquad$ points. This should be enough to see the shape of the graph.
- If your points go off the graph, $\qquad$ . (Unless it is really close to the edge of the graph, then you can just estimate where it would be)
- YOU MUST $\qquad$ because the 7 numbers you chose are not the only possible numbers!
- $\qquad$ to show that the graph goes forever.

1) $a(x)=2 x+4$

| $x$ | $a(x)$ |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

2) $b(x)=x^{2}-3$

| $x$ | $b(x)$ |
| :--- | :--- |
| -3 |  |
| -2 |  |
| -1 |  |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |


4) $d(x)=|x-2|$

| $x$ | $d(x)$ |
| :--- | :--- |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
| 6 |  |


5) $e(x)=2-3 x$

| $x$ | $e(x)$ |
| :--- | :--- |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |


6) $f(x)=\sqrt{x+10}$

| $x$ | $f(x)$ |
| :--- | :--- |
| -10 |  |
| -9 |  |
| -6 |  |
| -1 |  |
| 6 |  |


7) $g(x)=\frac{x}{4}$

| $x$ | $g(x)$ |
| :--- | :--- |
| -8 |  |
| -4 |  |
| -2 |  |
| 0 |  |
| 2 |  |
| 4 |  |
| 8 |  |

8) $h(x)=\frac{10}{x}$

| $x$ | $h(x)$ |
| :--- | :--- |
| -10 |  |
| -5 |  |
| -4 |  |
| -2.5 |  |
| -2 |  |
| -1 |  |
| 1 |  |
| 2 |  |
| 2.5 |  |
| 4 |  |
| 5 |  |
| 10 |  |


9) When graphing functions, WHY is it important that you connect the points?
10) When graphing functions, WHY is it important that you put arrows on the ends?

