Review: Day 1: Vertex Form/Characteristics

1. $\mathrm{f}(\mathrm{x})=2(x-1)^{2}+3$
2. $\mathrm{f}(\mathrm{x})=-(x+3)^{2}+1$


| $x$ | $y$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

$\mathrm{a}=$ $\qquad$ $h=$
$k=$ $\qquad$
Opens: up or down
Vertex: $\qquad$
Max or Min: $\qquad$
Axis of symmetry: $\qquad$
X-Intercept: $\qquad$
$Y$ - Intercept: $\qquad$
Rate of Change from $x=-1$ to $x=0$
Domain: $\qquad$
Range: $\qquad$
End behavior: As $x \rightarrow-\infty, y \rightarrow$

$$
x \rightarrow \infty, y \rightarrow
$$

Interval of Increase: $\qquad$
Interval of Decrease: $\qquad$

| $x$ | $y$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

$a=$ $\qquad$ $h=$ $\qquad$ $\mathrm{k}=$ $\qquad$

Opens: up or down
Vertex: $\qquad$
Max or Min: $\qquad$
Axis of symmetry: $\qquad$
Roots: $\qquad$
Y-Intercept: $\qquad$
Slope from $x=-5$ to $x=-3$
Domain: $\qquad$
Range: $\qquad$
End behavior: As $x \rightarrow-\infty, y \rightarrow$

$$
x \rightarrow \infty, y \rightarrow
$$

Interval of Increase: $\qquad$
Interval of Decrease: $\qquad$



Name: $\qquad$
3. $\mathrm{f}(\mathrm{x})=2(x+2)^{2}$

| $x$ | $y$ |
| :---: | :---: |
|  |  |
|  |  |
|  |  |
|  |  |
|  |  |

$\qquad$ $h=$ $\qquad$ $\mathrm{k}=$ $\qquad$
Opens: up or down
Vertex: $\qquad$
Max or Min: $\qquad$
Axis of symmetry: $\qquad$
Zeros: $\qquad$
$Y$ - Intercept: $\qquad$
Rate of Change from $x=-1$ to $x=0$
Domain: $\qquad$
Range: $\qquad$
End behavior: As $x \rightarrow-\infty, y \rightarrow$
$x \rightarrow \infty, y \rightarrow$
Interval of Increase: $\qquad$
Interval of Decrease: $\qquad$

Write the equation of the graph in vertex form:
4.

AOS: $\qquad$ ; Vertex: $\qquad$
5. $\qquad$
AOS: $\qquad$ ; Vertex: $\qquad$
6. $\qquad$
AOS: $\qquad$ ; Vertex: $\qquad$



Convert the following from vertex form to standard form:

$$
\text { 7. } f(x)=2(x-1)^{2}+3
$$

8. $\mathrm{f}(\mathrm{x})=-(x+3)^{2}+1$
