Name $\qquad$ Class $\qquad$ Date $\qquad$
9-1

## Practice

Form K

## Quadratic Graphs and Their Properties

Identify the vertex of each graph. Tell whether it is a maximum or a minimum.
1.

2.

3. Graph $y=5 x^{2}$.

| $\mathbf{x}$ | $\mathbf{y}=\mathbf{5} \mathbf{x}^{\mathbf{2}}$ | $\mathbf{y}$ |
| :---: | :---: | :---: |
|  |  |  |
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|  |  |  |



Vertex: $\qquad$

Max/Min: $\qquad$

Axis of Symmetry: $\qquad$

Width: $\qquad$

Domain: $\qquad$

Range: $\qquad$
4. Graph $y=-\frac{2}{3} x^{2}$.

| $\mathbf{x}$ | $\mathbf{y}=\mathbf{x}^{\mathbf{2}}$ | $\mathbf{y}$ |
| :---: | :---: | :---: |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |



Vertex: $\qquad$

Max/Min: $\qquad$

Axis of Symmetry: $\qquad$
Width: $\qquad$

Domain: $\qquad$

Range: $\qquad$

Order each group of quadratic functions from the widest to the narrowest graph.
5. $y=-2 x^{2} ; y=-4 x^{2} ; y=-3 x^{2}$
6. $y=\frac{1}{3} x^{2} ; y=3 x^{2} ; y=\frac{1}{6} x^{2}$
7. Graph $y=2 x^{2}+1$

| $\mathbf{x}$ | $\mathbf{y}=2 \mathbf{x}^{2}+\mathbf{1}$ | $\mathbf{y}$ |
| :---: | :---: | :---: |
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## Vertex:

$\qquad$ Max/Min: $\qquad$

## Axis of Symmetry:

$\qquad$
Width: $\qquad$
Domain: $\qquad$
Range: $\qquad$
8. Graph $y=-\frac{1}{4} x^{2}+2$

| x | $y=-\frac{\mathbf{1}}{\mathbf{4}} x^{2}+\mathbf{2}$ | y |
| :--- | :--- | :--- |
|  |  |  |
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Vertex: $\qquad$

Max/Min: $\qquad$

Axis of Symmetry: $\qquad$

Width: $\qquad$

Domain: $\qquad$

Range: $\qquad$

