$\qquad$
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## NOTES: Section 9.1-9.6 REVIEW

Goals: \#1 - I can evaluate and approximate square roots.
\#2 - I can solve a quadratic equation by finding square roots.
\#3 - I can simplify radical expressions.
\#4 - I can graph a quadratic function.
\#5 - I can use a graph to find or check a solution of a quadratic equation.
\#6 - I can use the quadratic formula to solve a quadratic equation.

## Section 9.1: Square Roots

Evaluate the following expression.

1. $-\sqrt{49}$
2. $\pm \sqrt{81}$
3. $\sqrt{100}$

## Section 9.2: Solving Quadratic Equations by Finding Square Roots

Solve the following equations. Write your answer in simplest radical form.

1. $x^{2}=25$
2. $3 x^{2}=108$
3. $-4 x^{2}-5=59$
$\qquad$
$\qquad$ Date: $\qquad$

## Section 9.3: Simplifying Radicals

Simplify the following expressions.

1. $\sqrt{54}$
2. $\sqrt{75}$
3. $2 \sqrt{32}$
4. $\sqrt{\frac{9}{64}}$
5. $\sqrt{\frac{2}{3}}$
6. $3 \sqrt{\frac{15}{20}}$

## Section 9.4: Graphing Quadratic Functions

Graph the function by completing the table. Identify the graph's axis of symmetry (AOS), vertex, and tell whether the graph opens up or down.

1. $y=x^{2}-4 x-3$

AOS: $\qquad$
vertex: $\qquad$
$y$-int: $\qquad$
opens: $\qquad$

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


$\qquad$ Hour: $\qquad$ Date: $\qquad$

## Section 9.5: Solving Quadratic Equations by Graphing

Solve the quadratic equations by graphing. Identify the graph's axis of symmetry (AOS), vertex, solutions, and tell whether the graph opens up or down.

1. $y=-x^{2}+4$

AOS: $\qquad$
vertex: $\qquad$
$y$-int: $\qquad$
opens: $\qquad$
solution/s: $\qquad$

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


2. $y=x^{2}-2 x-3$

AOS: $\qquad$
vertex: $\qquad$
$y$-int: $\qquad$
opens: $\qquad$
solution/s: $\qquad$


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

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## Section 9.6: Solving Quadratic Equations by the Quadratic Formula

Solve the quadratic equations using the quadratic equation. Write your answer in simplest radical form.

1. $-x^{2}+3 x-2=0$
2. $x^{2}-2 x=8$
