# IMPACT SAMR Cover Sheet

**Teacher: W. Becton**

**Louisiana Math Standard (include description):**
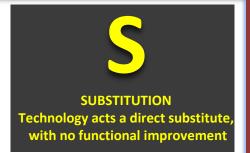**A-REI.B.4b – Solve quadratic equations by completing the square.**
**F-IF.B4 – Graph equations on coordinate axes.**
**F-IF.B.5 – Relate the quantitative relationship of a function and its graph.**

| | Task Overview | Learning Objective(s) | Suggested Technology |
|---|---|---|---|
| **REDEFINITION**<br>*Technology allows for the creation of new tasks that were previously not conceivable.* | Insert the brief description from the "R" task card here.<br>**Students will interact with students from other classes thru the computer to discuss finding.** | Insert the learning objective(s) from the "R" task card here.<br>**Relate the quantitative relationship of a function and its graph.** | Insert the suggested technology from the "R" task card here.<br>**Computer**<br>**Blackboard Software** |
| **MODIFICATION**<br>*Technology allows for the creation of new tasks that were previously not conceivable.* | Insert the brief description from the "M" task card here.<br>**Students will develop a blog on Blackboard discussing their findings from Task Card 1 and 2.** | Insert the learning objective(s) from the "M" task card here.<br>**Relate the quantitative relationship of a function and its graph.** | Insert the suggested technology from the "M" task card here.<br>**Computer**<br>**Blackboard Software** |
| **AUGMENTATION**<br>*Technology acts as a direct tool for substitution with some functional improvement.* | Insert the brief description from the "A" task card here.<br>**Students will compare the equations/solutions from Task Card 1 with the graphs of the equations.** | Insert the learning objective(s) from the "A" task card here.<br>**Solve quadratic equations by Completing the Square.**<br><br>**Graph equations on coordinate axes.** | Insert the suggested technology from the "A" task card here.<br>**Graphing calculator**<br>**Desmos software** |
| **SUBSTITUTION**<br>*Technology acts as a direct tool for substitution with no real change.* | Insert the brief description from the "S" task card here.<br>**Students will solve equations by Completing the Square.** | Insert the learning objective(s) from the "S" task card here.<br>**Solve quadratic equations by Completing the Square.** | Insert the suggested technology from the "S" task card here.<br>**4-function calculator** |

**transformation**

**enhancement**

# Ch 4:6 – Investigating Completing the Square

**Students will solve equations by Completing the Square.**

1. Solve each equation using Completing the Square.
   1. $x^2 + 6x + 8 = 0$
   2. $4x^2 + 4x - 48 = 0$
   3. $x^2 - 12x + 11 = 0$

2. Compare your answers with others in your group.

3. Correct/Modify as needed.

This task uses:

4-function calculator

Learning Objective(s):

Solve quadratic equations by Completing the Square.

# Ch 4:6 – Investigating Completing the Square

**Students will compare the equations/solutions from Task Card 1 with the graphs of the equations.**

1. On task card 1, substitute the 0 in each equation with a "y".

2. Using a graphing calculator, graph each of the 3 equations.

3. Discuss among your group what the solutions to your equations represent in the graph of the same equations.

This task uses:

Graphing calculator

Desmos software

Learning Objective(s):

- Solve quadratic equations by Completing the Square.

- Graph equations on coordinate axes.

# Ch 4:6 – Investigating Completing the Square

**Students will develop a blog on Blackboard discussing their findings from Task Card 1 and 2.**

1. Log into Blackboard.
2. Go to Algebra 2, Ch 4:6 Discussion.
3. Create a blog discussing your finding and theories from Task Card 1 and 2.

This task uses:

Computer

Blackboard

Learning Objective(s):

- Relate the quantitative relationship of a function and its graph.

# Ch 4:6 – Investigating Completing the Square

**Students will interact with students from other classes thru the computer to discuss finding.**

1. Log into Blackboard.
2. Go to Algebra 2, Ch 4:6 Discussion.
3. Read and comment on a minimum of 5 discussion threads created by students not in this hour.
4. Read and comment on a minimum of 3 discussion threads created by students that are in this hour, but not in your group.
5. Write a short summary of your previous theory and any new insights you may have received by reading these discussions.
6. Turn in your work from Task Card 1 and your summary.

This task uses:

Computer

Blackboard

Learning Objective(s):

- Relate the quantitative relationship of a function and its graph.