

Completing the Square Team Challenge

1. Find the Vertex and x-intercept by completing the square.

a. $y = x^2 - 2x - 35$

b. $y = x^2 + 12x - 10$

c. $y = 2x^2 - x - 31$

d. $y = 4x^2 - 5x - 21$

2. Use completing the square to find the x-intercepts of the following equation:

$$y = ax^2 + bx + c$$

Group Evaluation

Write the names of your group members in the numbered boxes. Then, assign yourself a value for each listed attribute. Finally, do the same for each of your group members and total all of the values

Values: 3=Superior 2= fair 1=weak

Criteria	Myself	1.	2.
Participated in Group Discussions			
Contributed Useful Ideas			
Total			

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Standard: F.IF.8 - Write a function defined by an expression in different but equivalent forms to reveal and explain different properties of the function.

Students will effectively contribute to the group.

Task: Working cooperatively with others students will find the vertex and x-intercepts of a given problem by completing the square. Problems 1a-1d will have different numbers for each member of the group; problem 2 will be the same for each member.

Criteria: (problems 1 & 2)

- Determine the “h” value
- Determine the “k” value
- Determine the vertex based on the found “h” and “k” values
- Determine the x-intercept based on the found “h” and “k” values
- Accurate calculations

Rubric (problems 1 & 2)

Criteria	Done Successfully (1 pt.)	Not Done Successfully (0 pts.)
Determine the “h” value		
Determine the “k” value		
Determine the vertex based on the found “h” and “k” values		
Determine the x-intercept based on the found “h” and “k” values		
Accurate calculations		

Problem 3 will be for me to gain a better understanding of my students’ ability to effectively contribute to the group.