Name: _____

Date: _____   Period: _____

1. Brandy and Raejon were told to determine if $y = 2(x + 2)^2 - 2x^2$ is a quadratic function or not. Their work is shown below:

Brandy	Raejon

Brandy

$y = 2(x + 2)^2 - 2x^2$

$y = 2(x+2)^2 - 2x^2$

$y = (2x+4)^2 - 2x^2$

$y = (2x+4)(2x+4) - 2x^2$

$y = 4x^2 + 8x + 8x + 16 - 2x^2$

$\boxed{y = 2x^2 + 16x + 16}$

Yes. This is a quadratic function

Raejon

$y = 2(x + 2)^2 - 2x^2$

$y = 2(x+2)^2 - 2x^2$

$y = 2(x+2)(x+2) - 2x^2$

$y = (2x+4)(x+2) - 2x^2$

$y = 2x^2 + 4x + 4x + 8 - 2x^2$

$\boxed{y = 8x + 8}$

No. This is not a quadratic function.

(a) Do you agree with Brandy or Raejon or neither? _____

(b) Why? Provide **evidence** and **warrants** to support your answer.

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We Understand:

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c) Write a mathematical argument to <u>support</u> your claim in part (a). We will use the argument rubric to grade your writing.

Consider the following when writing your argument:

- ☐ **CLAIM**: Do you agree with Brandy or Raejon or neither?
- ☐ **EVIDENCE**: Explain why. Who made a mistake? When? Show your work!!
- ☐ **WARRANT**: Math facts and definitions to support your evidence. (We Understand on front)
- ☐ Use <u>complete sentences</u>, correct <u>math vocabulary,</u> and be SPECIFIC.

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