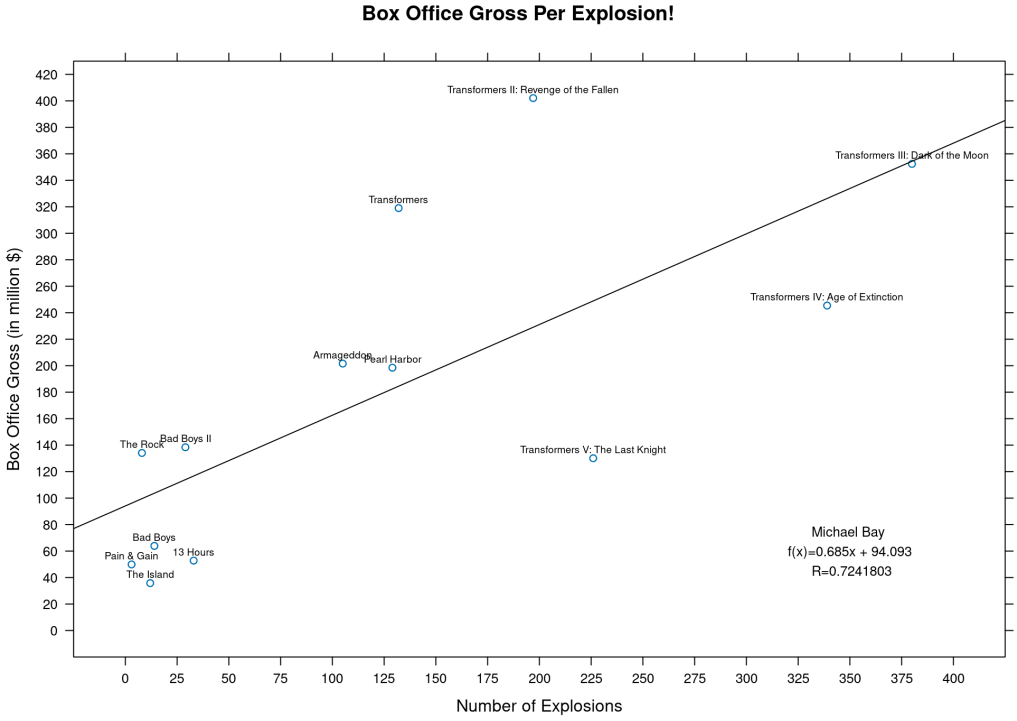
Name:_____ Date:_____

Predicting Values
Team Response Sheet

Instructions:

In your student teams, work together to respond to the following questions about the Box Office Gross (US/Canada) per Explosion graph below. Remember to use your team roles to keep your group on task.



Movie	Explosions	Box Office Gross (in million $)
Bad Boys	14	63.9
The Rock	8	134.1
Armageddon	105	201.6
Pearl Harbor	129	198.5
Bad Boys II	29	138.4
The Island	12	35.8
Transformers	132	319.0
Transformers II: Revenge of the Fallen	197	402.1
Transformers III: Dark of the Moon	380	352.4
Pain & Gain	3	49.9
Transformers IV: Age of Extinction	339	254.4
13 Hours	33	52.8
Transformers V: The Last Knight	226	130.1

source: https://www.rottentomatoes.com/celebrity/michael_bay

1. What do you notice about where the points are and where the line is?

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2. Recall from Algebra that every line can be represented by an equation in the form ***y = mx + b***. In this case, the equation of the regression line is ***y = 0.685x + 94.093***. What do the x- and y-values represent in this equation?

3. According to the equation, what is the slope of this line? What does the slope mean in relation to the number of explosions?

4. When the number of explosions (x-value) is zero, what is the box office gross (y-value)? How do you know? What does this mean?

5. If you wanted to know the box office gross for the point that lies the closest to the line, what would the equation be? Write the equation and solve it.

6. What was the actual box office gross for the point that lies closest to the line?

7. What if Michael Bay made a movie that had 275 explosions? What would his predicted box office gross be? Show how you arrived at the solution.